AMIGA WORLD

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VIDEO TIPS — p. 48



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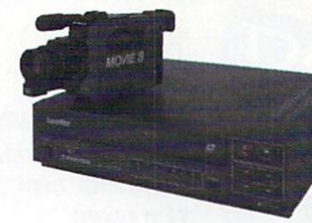
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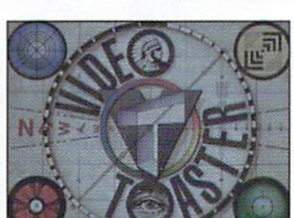
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ShowMaker automatically loads your graphic and music files and cues up video before it's needed, without interrupting the playback. This means you can create long running productions, limited by disk space, not RAM.



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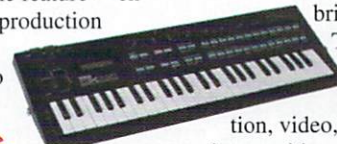
ShowMaker's built-in video titler gives you dynamic scrolling titles. And with ShowMaker you can run titles over video and animation, even adding special effects like drop shadow and outline! ShowMaker also includes a collection of high quality video fonts and exciting backgrounds.

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ShowMaker features dozens of built-in transitions, including wipes, fades, and dissolves. You can create exciting professional-style transitions with just a click of the mouse.

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Add dynamic stereo soundtracks just as easily. Simply position segments on any of the music or sound effects tracks with the mouse. ShowMaker supports MIDI output, MIDI files, SMUS files, and IFF samples. And ShowMaker's unique auto-sync feature** ensures that your production always remains synchronized to the music!



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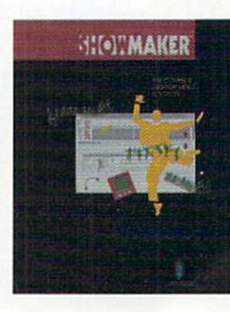
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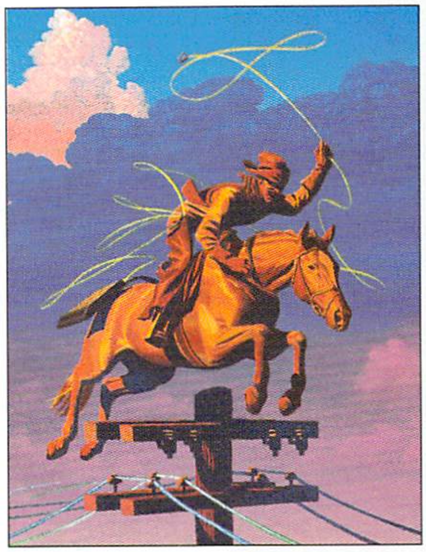
VOLUME 7, NUMBER 8 AUGUST 1991

C·O·N·T·E·N·T·S

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ARTICLES

COLUMNS



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DEPARTMENTS

REVIEWS

GAMES

AMIGAWORLD SPECIAL PRODUCTS

For information on *AW* Special Products, consult our handy *AmigaWorld* Catalog, which begins on page 62. The Catalog includes: *AW* Videos, Tool Chest, *AW* Game Package, *AW* Books, and more. *Plus:* Free special-incentive bonus. *Also:* Animation Video II (see page 33) and *AW* Tech Journal (see page 49).

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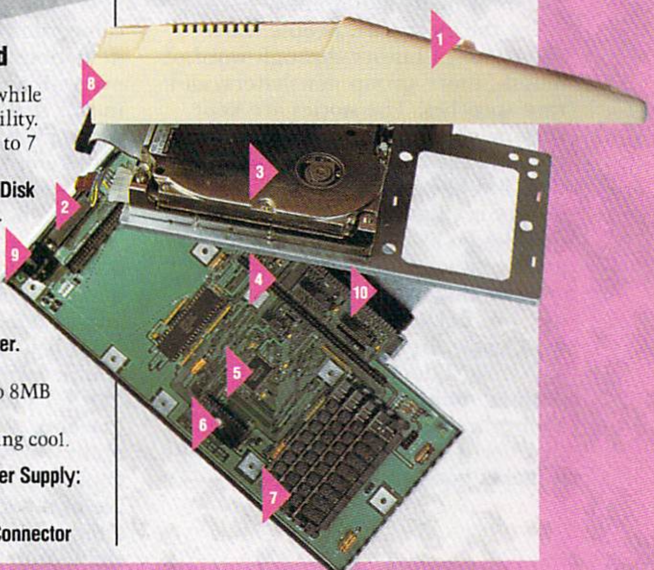
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CHIEF CONCERNS

History made easy.

A LOT OF FOLKS in this market are experts in Amiga history. That widespread knowledge has made folks like Jay Miner, Dale Luck, R.J. Mical, and the late Rob Peck into major heros.

They deserve it. They thought hard, worked harder, and came up with a heepum good system.

I found out how important these guys were at an AmiEXPO a couple of years ago. Jay Miner was sitting in a booth talking about Ultracard, which he had done some work on. There was a buzz around the booth. People were whispering things like "Hey. There he is. Should I go up to him?"

The reverence for the man was quite evident, and those not too timid were asking for autographs. Believe me. The guys that built the original IBM PC in Boca Raton don't get asked for many autographs.

For the most part, people learn about Amiga history through word of mouth, users' group newsletters, and rare speeches. The stories are kept very much alive through the enthusiasm and the energy of this community. But like old Indian folktales, this history is vulnerable. As years and decades go by, stories are changed—and eventually forgotten.

Some things deserve oblivion. To me, Jim Bakker, Slim Whitman, Marilyn Quayle, Bryant Gumbel, and Gerald R. Ford don't seem quite worthy of immortality. But hey, we're talking about the Amiga here. This is a story that needs to be told, not just because it makes good history, but also because it involves some pretty outrageous and remarkable events. It's a fun story.

So we're going to do it. Not in some staid and static form like a written history that will get dusty and faded. Forget that. Try video instead.

We'll interview the pioneers, both those that built the system and those that use it. We'll cover all the technology, from the October 1985 launch of the A1000 to the latest A3000 systems. Then our Toaster-inspired, full-fledged, on-premises video studio (the knucklehead's bragging again) will kick in to give it the professional touch.

I know what you're thinking. This just wouldn't be a Chief Concerns column if the jerk who writes it didn't ask for something. Right you are.

We know that half of you are so camcorder happy that you've got indentations in your shoulders and one eye with a permanent squint. That means that you've lugged the thing to users' groups, Amiga shows, press conferences, user sites, and other places where socially acceptable video may be shot.

What we want is your footage. It doesn't have to be stable, gussied up, or well-lit. This is a documentary, by gum. Content is the important thing. Now. being naturally self-centered, you're asking, "Hey, dirtball! What's in it for me?"

Plenty. We'll give you enough money to buy over ten cases of Diet Pepsi. Or you could blow it on a couple of moderately priced ties, or even a big bucket of used golf balls. That's right. You could get 50 smackers if we use your footage, not to mention a modicum of fame and glory. And we don't care how you spend it. Heck, we'll even send your tape back once the history video is done.

Once all this stuff is put together on our tape, you'll be able to see and hear Amiga heros. So you'll get the big picture.

Then we'll turn you into an expert on Amiga trivia. You'll learn why a normal system error got the remarkably weird name of Guru Meditation Error. Who came up with Fat Agnus? How about a behind-the-scenes look at the early development of the system, including the shift in positioning from game machine to real computer? And just why were Andy Warhol and Deborah Harry chosen to launch this system? If Alex Trebek ever comes up with an Amiga category, you'll win hands down.

And, finally, we'll ask the early pioneers, along with a few newer ones, to predict the future of Amiga technology and tell us what they'd like to see happen.

Our video will take you from Los Gatos to West Chester to New York City, and you won't even need to hop on a smelly bus, or contemplate death in an undersized airplane seat. Just rest your bones in the Lazy-Boy, eat your Fritos, and hit Play. Now that's the way to learn history.

Doug Barney

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Choose GVP's Series II RAM Expansion Board, SCSI Hard Drive Controller or SCSI+RAM Hard Disk Card. Realize the potential of configuring your perfect solution without any need for compromise!

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SII A2000-RAM8/2: **The smallest and most compact 8MB RAM expansion board for the A2000!**

Features:

- ✓ 2MB of factory-installed RAM, expandable to 8MB.
- ✓ All memory fully Auto-Configured.
- ✓ Also supports 6MB configuration for maximum memory utilization for Commodore's A2088/2286 "bridgeboard" users.
- ✓ Uses easy-to-install, industry standard, SIMM memory modules. No more bent pins or incorrectly inserted DRAM chips!
- ✓ GVP's state-of-the-art VLSI technology has reduced an 8MB RAM expansion board to a "half-card"! This translates into a lower parts count and also means the highest possible reliability and life expectancy.

SCSI Hard Disk Controller

SII A2000 SCSI "Hard-Disk-Card": **Specifically designed for those users who don't need memory expansion but still need maximum hard disk performance at a budget price.**

Features:

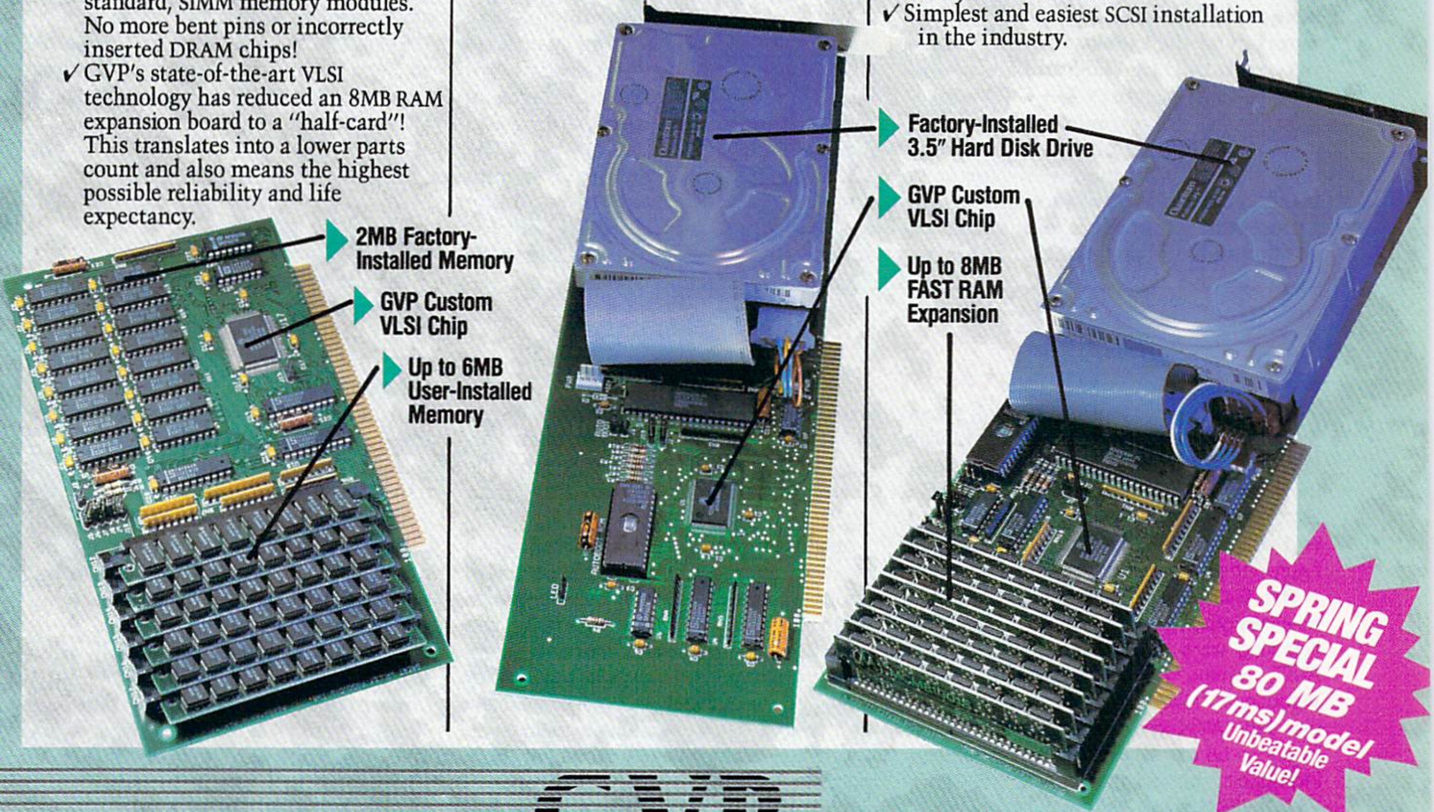
- ✓ Incredible SCSI hard disk performance achieved through GVP's innovative new custom chip design.
- ✓ Supports virtually any SCSI device including: CD ROMs, tape drives, Bernoulli drives, removable hard drives . . .
- ✓ Fully implements Commodore's Rigid Disk Block (RDB) standard as well as the new DIRECT SCSI interface standard.
- ✓ Allows direct AUTOBOOT from Fast File System Partition.
- ✓ Simplest and easiest SCSI installation in the industry.

SCSI Hard Disk+RAM Expansion

SII A2000-SCSI Hard Disk+RAM-Card: **State-of-the-Art integration packs GVP's high performance SCSI controller, 8MB FAST RAM expansion and a 3.5" hard drive drive INTO A SINGLE A2000 EXPANSION SLOT!**

Features:

- ✓ GVP's new custom chip design provides DMA performance and unique direct dual port memory access to FAST RAM, eliminating typical DMA side effects under heavy graphics load.
- ✓ Easy-to-install SIMM memory modules allow flexible memory configurations for Zero through 8MB. Supports 6MB FAST RAM configuration for BridgeBoard users.
- ✓ Supports virtually any SCSI device.
- ✓ Allows direct AUTOBOOT from Fast File System Partition.
- ✓ Simplest and easiest SCSI installation in the industry.



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OVERSCAN

News, New Products and Networks

He Did His Part in San Francisco

SAN FRANCISCO—"Lots of us are out this weekend; I'm just doing my part," stated Commodore President Jim Dionne when asked why CBM's top dog was personally demonstrating **Commodore Dynamic Total Vision** (CDTV) to the public. "It's a great way to find out what folks think of CDTV."

May 3 and 4 found Dionne at Macy's downtown San Francisco store introducing CDTV to attentive shoppers. A steady stream of people greeted Dionne as he showed off such CDTV software as **World Vista Atlas** (***Applied Optical Media***), **Music Maker** (***CDTV Publishing***), and **Time Table of History: Science and Innovation** (***Xiphias***). He also entertained the crowd with 15-frames-per-second CDTV video and Fleetwood Mac's *Behind the Mask* CD+G (Compact Disc Plus Graphics) music release.



Jim Dionne's dog-and-pony show, featuring Commodore's CDTV.

Dionne's four-hour-per-day stint was only part of Commodore's Northern California CDTV introduction. Several Commodore managers demonstrated the Amiga-based system at other Macy's and Software Etc. stores in the Bay area.

Commodore's effort began on May 2 with newspaper ads inviting customers to "experience the possibilities of CDTV." More appeared on May 3 in most Northern California papers, asking, "What will they think of next?" The ads touted CDTV's abilities as a multimedia educational tool while pointing out its ability to play standard and +G audio CDs. *—Bob Eller*

Industry Boosts Amiga and CDTV In Commodore's Absence

NEW YORK—For those wondering about the state of multimedia, the Big Apple was the place to be May 14–16. That's when the New York Hilton hosted MultiMedia Expo, at which developers, vendors, and end users gathered to discuss present and future industry issues.

The Expo proved to be a gathering of heavyweights. Among the companies participating were IBM, Apple, Sony, Phillips, AT&T, Nynex, C-Cube, GTE, RasterOps, VideoLogic, Microsoft, Autodesk, and Macromind. Although Commodore was nowhere to be found, several companies and individuals showed the Amiga and CDTV. ***The Vivid Group*** (RS# 101), for instance, demonstrated **Mandala**, its "virtual-reality authoring software," on an **A2000**. Meanwhile, ***Amigo Business Machines*** displayed **CDTV** and an **A3000** running the **Scala** presentation software from ***GVP*** (RS# 102).

Attendees were able to choose from a variety of seminars, industry panels (billed as SuperSessions), and half-day workshops in addition to the floor exhibits. The SuperSessions, presented mainly by companies working on multimedia products or strategies, turned out to be full of useful information. Representatives discussed where their companies are headed, and, more importantly, what standards and direction the multimedia industry needs. It *Continued on p. 12*

Win-Win Competition

To discover existing inventions and inspire ideas to meet the needs of disabled children and adults. . .that is the goal of Computing to Assist Persons with Disabilities (CAPD). The program, and its attendant contest, is sponsored by Johns Hopkins University and funded by grants from the National Science Foundation and MCI Communications. Awards, including the grand prize of $10,000, will number over 100.

CAPD seeks ideas, systems and devices, and software to assist those with disabilities related to vision, hearing, language, mental retardation, learning, neuromuscular or neurological disorders, mobility, and more. Judging categories will include professionals, amateurs, and full-time students.

Entries must be received by August 23, so send a $2 check now for your Entry Information Kit: CAPD, PO Box 1200, Laurel, MD 20723.

—BG

Within Reach

If you are not quite ready for the advanced features of Caligari Broadcast, a 16-million color, high-end animation package, check out ***Octree Software***'s two new scaled-down versions: **Caligari PRO Design** ($495) and **Caligari PRO Animate** ($1295). Both require an accelerated Amiga (68020 or 030) and a minimum of 3MB of RAM.

PRO Design, a 3-D conceptual-design program, includes the modeling features of Caligari Broadcast (including single-point editing), but not its animation capabilities.

PRO Animate provides a full video-production environment, with animation capabilities just as in Broadcast 2.0. Animate offers 3-D script preview and gives you control over many industrial VCRs. It uses the standard Amiga graphics display for its final 740×482 ouput. (RS# 152.) *—JJ*

For information about the vendors of products mentioned, see "Manufacturers'/Distributors' Addresses" list on p. 60.

Amiga Shoots the Bird from Poland!

Through the efforts of Commodore Electronics Limited, Amiga videographics flew from Warsaw, Poland, to Turkey and the UK in April. The vehicle for this showcase-via-satellite was a championship soccer game between Poland and Turkey.

Prior to his overseas jaunt to set up for the event, Miami-resident Joel Tessler created animations to complement the action on a PAL-configured A3000. Once in Warsaw, Tessler assisted Amiga specialist Greg Rogala in setting up the Amiga system on the multimillion-dollar Telewizja Polska 2 video truck. Now that it's there, the Amiga will remain a permanent fixture at the Polish Broadcast Corporation in Warsaw.

In a large hall inside the stadium, Commodore sponsored a show to demonstrate plenty of Amigas and games. A press conference and a victory celebration for the winning Polish team followed the broadcast.



Planes, trains, and Amigas.

In an area dominated by other computer systems, the event was also a victory for the Amiga. Bravo, Commodore Electronics Limited, Bravo!

For the Gold

Soccer fans who can hardly wait for the 1994 World Cup can start gearing up now with **World Cup Soccer** ($44.95). The software simulates the 1990 games, putting you in control of the 24 teams that competed. You begin by choosing a country to represent; then select players and assign positions. "The challenge comes with your ability to discover the weaknesses in your opponent's line-up and pinpoint subtle strategies and tactics," says ***US Gold***.

If you are more intrigued by US Gold's name than its soccer title, perhaps you would prefer to search for ancient treasure in the forbidden jungles of Mexico with the company's action/arcade game, **Gold of the Aztecs** ($49.95). Here, you must guide your hero toward Quetzalquotal—avoiding cannibals, man-eating plants, false floors, and other nasties—on a two-way scrolling screen, while music, graphics, and animation play. (RS# 115.) *—BG*

Arts and Letters

Looking for a wide variety of backgrounds and textures? How about a whopping 1150 hi-res, photo-realistic maps and images? ***Imagetects*** provides its massive **ImageCELs** collection ($395) on one CD-ROM disc. With ImageCELs, one size fits all: The disc contains files in 14 formats for Amiga, DOS, Unix, and Mac! (RS# 110.)

Bringing the thousands of Mac-format PostScript typefaces into Gold Disk's Professional Page—in either bitmap or .metric file format—is **Mlfont 1.1**'s forte. For $105, you can get lost in a sea of faces and convert Mac and IBM printer fonts into a Pro Page-accessible format to boot! Contact ***Mirror Image Productions***. (RS# 111.)

If you want to give your Amiga fonts a more professional look for video, consider adding antialiasing and shadows with **Shadowmaker**, from ***L&V Productions*** (RS# 112). Shadowmaker ($24.99) is a what-you-see-is-what-you-get program with a real-time interface. It promises not only time savings, but also broadcast-quality ColorFonts output. If you want to use Shadowmaker fonts in applications that do not support the ColorFonts standard, the included On-Top utility can help. On-Top also lets you control the mapping of face-shadow and antialiasing colors.

To sharpen the colors in your fonts and other screen graphics, consider the **Video Crisper**. Like nonchlorine bleach, the Crisper promises to brighten colors—so that reds look redder and blues look bluer—without fading. The hardware-software combo ($49) is available from ***The Memory Location*** (RS# 113).

—BG



On-Line Scan

By Tim Walsh

In the January issue (p. 114), I credited the recessive economy for keeping programmers at home writing an abundance of freely distributable code. Since then, the economy has shown nary a sputter of improvement, yet the quantity of new Amiga files has dwindled.

Whether we place the blame on the economy or the President's irregular heartbeat, a slowdown at the PD corral is fact. Maybe we are a spoiled lot, but an appeal is in order. To Amiga users everywhere: Pay your shareware fees. To Amiga programmers: Let's see more programs. Enough said.

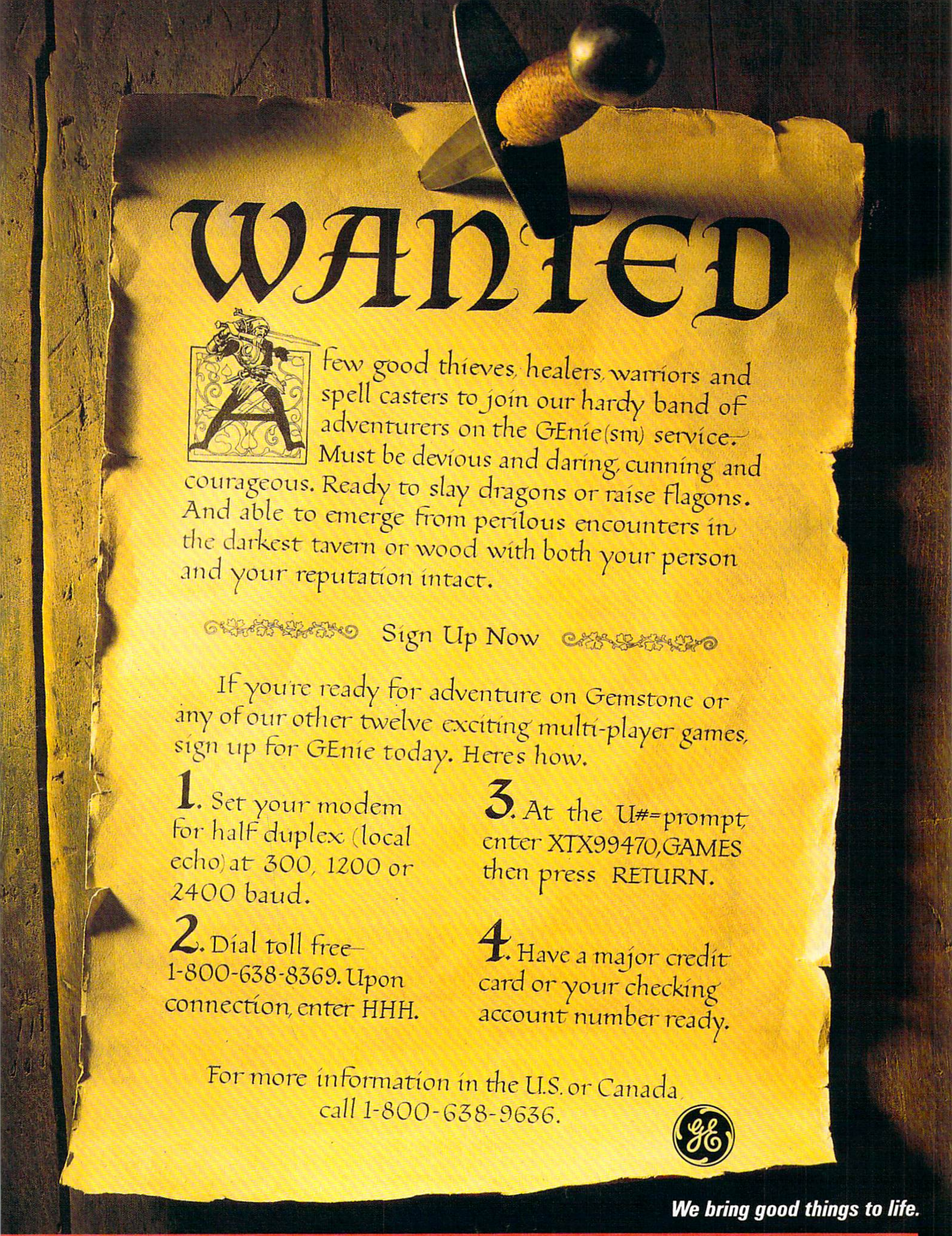
In spite of the shortage, People/Link is keeping the PD shelves stocked. Two must-haves are an all-purpose disk optimizer called **OPTIMIZER.LZH** (AmigaZone section 4, file #27907) and Mike Berro's **SIND.LZH** (AmigaZone section 4, file #27929). SIND.LZH (System Info Display, version 3.03) displays the status of all the operations your Amiga is performing at any given time.

CompuServe is dishing up a variety of appetizing selections, with the tastiest files residing in the AmigaTech area. **FRQLIB.LZH** (Library 11) is release 3 of Khalid Aldoseri's file-requester libraries. These automatically replace your current file requesters for AmigaDOS 1.2, 1.3, and 2.0. In the same library, check out Eddy Carroll's **CPUBLT.LZH**, which allows you to replace the BltBitMap routine for faster, smoother screen scrolling on accelerated Amigas.

Also, be sure to get **AIBB3.LZH** (Library 4, file #11299) the next time you're on GEnie. This is the latest version of LaMonte Koop's Amiga Intuition Based Benchmarks, used to test the performance of your Amiga under a wide variety of configurations. A graphic comparison reveals how your Amiga rates against the unadorned A2000, A2500/20, and A3000/25. While you are there, don't overlook the Pac Man clone, **PAC91.ARC** (Library 9, file #11276), one of the most downloaded files in recent memory.

For more information on the networks mentioned above, call their voice numbers:

American People/Link: 800/524-0100
CompuServe: 800/848-8199
614/457-0802 from Ohio
GEnie: 800/638-9636

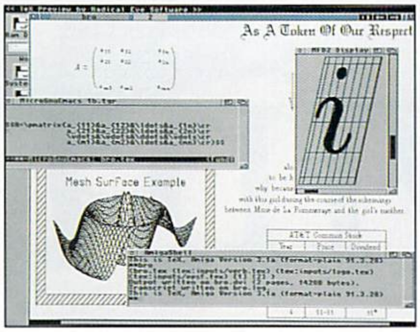

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For more information in the U.S. or Canada, call 1-800-638-9636.
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Publish or Perish

Radical Eye Software has cut the ribbons on the latest version of **AmigaTeX** ($200), a professional typesetting system that lets you produce printed documents, including such specialties as equations and tables. Heading up the list of new features are AmigaDOS 2.0 compatibility and full PostScript and graphics support.

With AmigaTeX, you can now choose from thousands of PostScript Type 3 and hinted Type 1 fonts from outside sources. Then you can scale, slant, and stretch them to any degree. In addition, AmigaTeX automatically renders PostScript fonts for screen display or print.

AmigaTeX also accepts scalable graphics from both Amiga and nonAmiga structured-drawing packages. Support is also included for TeX 3.1 and MF 2.7 standards, virtual fonts, and ARexx.



Radical Eye's AmigaTeX offers professional typesetting capabilities.

Upgrades are $10 for disks and $20 for the manual. Printer-driver disk sets are available for $75 to $100. (RS# 151.)

—JJ

Upgrade Update

ATonce-Amiga, the 80386 IBM PC/AT emulator from ***Vortex Computer Systems***, is now available for the A2000 via a new plug-in adapter. The A2000-version card promises support for AT-compatible hard disks, floppies, and internal and external RAM expanders. New software lets the ATonce emulate CGA, Olivetti, Hercules, and Toshiba T3100 monochrome-graphics EGA and VGA cards. Plus, you can now switch between active screens. (RS# 153.)

A-Sound Elite, the professional version of the A-Sound 2.0 audio sampler from ***Deltaware Products***, sports revamped editing facilities and is fully functional in stereo. It has an Undo command, freehand waveform-display editing, and over 20 special effects such as Echo, Reverb, Disguise, and Comb Filter. In addition, every ASF sample is an executable file with its own built-in player program. (RS# 154.)

If you think you know everything there is to know about the **Thinker** hypertext program from ***Poor Person Software***, think again! Version 2.1 ($80) supports text in mixed styles and colors and allows you to include color images within a text document. You can now create links to text, pictures, ARexx ports, or applications either in the Workbench or via the CLI. (RS# 155.)

Magni Systems, maker of the **4004/4004S** genlocks in both PAL and NTSC standard formats, has dropped list prices for the units to $995. Magni now includes the 4010 Remote Control unit, formerly an optional feature, with each 4004. (RS# 156.)

Viva II ($199.95) from ***MichTron*** can help you create interactive presentations, instructional applications, games, or media databases. You can also combine Viva II with video devices to create stand-alone interactive environments. For an extra $49.95, **Video Link** provides Viva II with remote control for laser-disc players through either Workbench or ARexx. (RS# 156.)

—JJ

Industry Boosts, from p. 8.
became obvious that CD-ROM will remain the most important format for multimedia because of its large and cost-effective storage capacity.

A number of CDTV and Amiga developers participated in the seminars and workshops. These included ***Xiphias***, ***Tiger Media***, and ***Gold Disk***, as well as Amiga Developers' Association President Al Hospers of ***Dr. T's Music Software***. CDTV and NewTek's Video Toaster were spoken of in glowing terms—and held up as examples of innovation—at several of the sessions I attended. I overheard several people voice disappointment at not seeing Commodore and NewTek represented on the show floor. (The latter attended the concurrent Video Expo in California.)

Could Commodore's presence have scored points for the company in the multimedia industry? I think so. Perhaps CBM will attend the next MultiMedia Expo, slated for November 18–20 in San Jose, California. For information concerning that show, call 212/226-4141.

—LRW

Life on the Moon?

The self-sufficient city. It's not yet a reality on Earth—can you build it on the moon? Not without handling many problems, and not without **Moonbase—Lunar Colony Simulator** ($49.95).

As commander of NASA's mission to colonize the moon, you must assemble such facilities as habitat modules, science labs, liquid-oxygen processing plants, and solar- and fission-power stations. Socio- and econometric models by NASA contractor KDT Industries show you how to build a closed-loop economy and include the effects of natural and man-made disasters, economic depression, and more.

To start colonizing, contact ***Wesson International***. And keep your eyes open for the company's upcoming **Tracon II**, a multiplayer air-traffic-control simulator. (RS# 114.)

—BG

Get Set for the SAT

Remember Cliff Notes, those booklets you relied on to get you through exams in school? Now Cliff Notes has gone digital, teaming up with ***StudyWare*** to produce **StudyWare for the SAT** ($49.95).

To help you prepare for that almighty college-entrance exam, the software covers 29 SAT topics with 860 questions, four full-length exams, and explanations for correct and incorrect answers. Need hints? No problem. A glossary? Just press a key. How about reports to track your progress? Sure, you can even print them out. And to keep you going even through power failures, *Cliff's SAT Preparation Guide* is included. (RS# 115.)

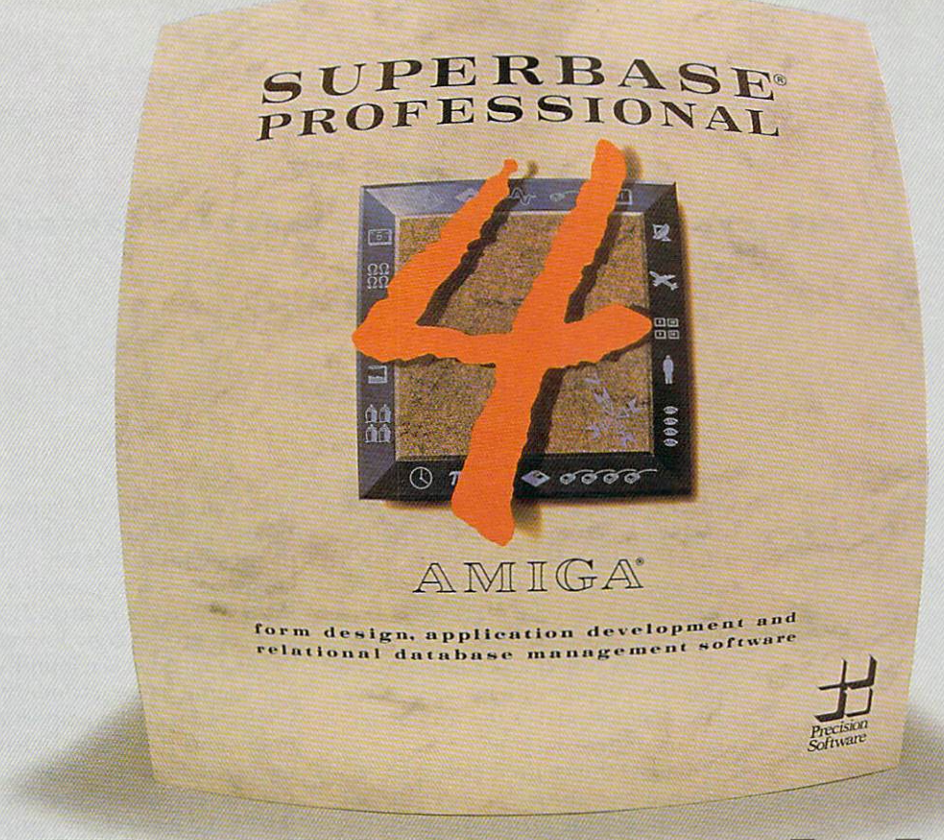
—BG

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Image World Chicago, featuring Video Expo and CAMMP show
July 29–August 2
Rosemont O'Hare Expo Center
Rosemont, IL
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REVIEWS

DynaCADD

Amiga CAD meets a Big Blue success story.

By Ron Bissett

WHILE IT'S TRUE that DynaCADD ($995) from ***Ditek International*** just made its Amiga debut, it is no newcomer to professionals using CAD (Computer Aided Drawing). Although DynaCADD was Atari-born, the MS-DOS version received high praise from *CAD/CAM Systems* magazine. Of course, PC users aren't accustomed to graphic interfaces in CAD software, and the magazine's reviewer was amazed that such an "innovative" interface existed.

The fact that DynaCADD is available for both the IBM and the Amiga is a great boon to designers who use both systems. In an architectural-design office such as my own, file exchange is a pressing issue, and a cross-platform program like DynaCADD effectively eliminates time-consuming conversions. Both versions of the program, by the way, were provided for this review. In addition to accommodating two platforms, DynaCADD integrates 2-D and 3-D operational modes.

Touring the Plant

Installing DynaCADD onto a hard drive is effortless. After installing the dreaded dongle device, just double-click on the Install icon and give the program a path. You are now ready for a tour of one of the more logically laid-out CAD programs I have seen.

Your tour guide, or manual, is thorough, well organized, and easy to understand. (The only complaint I have is that the screen shots, along with text errata, are a direct port—no conversion—from the IBM-version manual.) The reference section begins with two excellent tutorials, one for 2-D drawing and the other for 3-D creations. And DynaCADD's on-line help feature (select any command and press the Help key to get a full explanation) almost makes the traditional manual unnecessary.

To make things even easier, each time you pass the cursor over the corresponding icon, DynaCADD displays the name of each command in the upper-left corner of the drawing area, along with a one-line description of that command in the lower-right corner.

Right out of the box, DynaCADD's interface is exemplary. The drawing menu is organized in a vertical hierarchy that's like the root system of a plant. At the top of the hierarchy, there are 12 main-level drawing commands. Each one branches out to a set of subcommands, which in turn branch out to their own subsets. The bottom-most layer of a command chain brings you to a choice of entity type and location.

Once you get your drawing underway, you can alter it by using any of nine modifying controls, icons for which are displayed across the top of the drawing area. Included among these are the zoom effects. Zoom In seems to work as both an infinite as well as a dynamic function. The latter is indispensable in CAD drawing, allowing you, for example, to zoom in at one location to place the beginning of a line, then to zoom in at another location to place the end of the line. Since the Zoom command repeats until interrupted, you must click the right mouse button in order to return to the drawing command in progress.

If you want to review the commands used during the current session, you activate the command-history function by clicking on its icon or pressing the Tab key. A list of your commands will appear in a window below the drawing area. If you wish, you can print a copy for reference.

File functions are found under the File menu. These include storage and retrieval functions, import and export operations (DXF and DynaCADD's own DEF format), drawing default parameters, merge-drawings procedures, database clear, restore, and sort (to optimize data storage), memory status, background plotting, and exiting the program.

The Set menu controls the system-level dialog box, which lets you draw, load a new part, and change scale or units. In addition, you can adjust parameters for tracking, grids or axes, hatch patterns, and pen indexes and definitions.

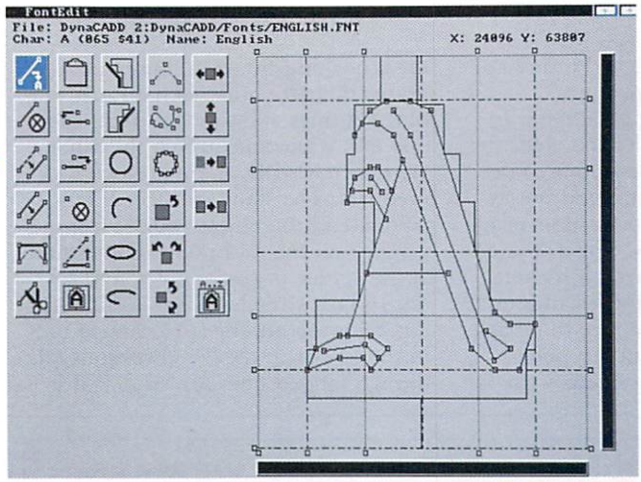
The Tools menu offers global-editing parameters that let you toggle the grids, axes, graphics, tracking, text, copy, and printer echo. Via the Images menu, you can store up to 16 zoom and scroll definitions for a drawing. Finally, using the GCP menu, which only works in 3-D mode, you can select up to seven predefined Do views and define up to nine custom geometric coordinate planes.

You can activate most of the pull-down menu functions with either your mouse or a keyboard equivalent. You can also create your own key definitions with the Create icon and DEFMACRO subcommand. DynaCADD's menu system, with its excellent range of commands and modifiers, is unmatched by any program I have used to this point.

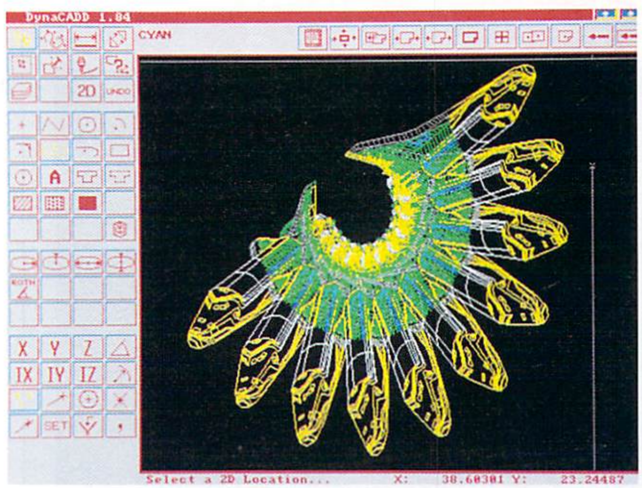
A Word with the Editor

Considering the ten Compugraphic fonts and predefined hatch patterns

For information about the vendors of products reviewed, see "Manufacturers'/Distributors' Addresses" list on p. 60.



Design your own fonts with DynaCADD's Font Editor.



DynaCADD's ample control panel.

that come with DynaCADD, it is hard to imagine ever needing DynaCADD's Vector Font Editor. But, for those special projects where only a custom font or hatch will do, the font editor saves hours of frustration. You can keep up to 16 fonts in memory at a time, and you can scale, slant, rotate, and otherwise edit them as desired.

The Vector Font Editor comes with all the necessary tools and editing functions you need to modify existing fonts or hatch patterns or to create new ones. Its documentation even includes a suggested reading list for the theory of font creation. Altogether, it is the most comprehensive and easy-to-use program of its type. The fact that such a feature is missing from many other "high-end" CAD programs only serves to further emphasize DynaCAdd's superiority.

Metamorphosis

For people who need to work in both, changing from 2-D to 3-D mode is only an icon away. Most of the commands from 2-D also work in 3-D mode. In addition, DynaCADD offers several new and powerful extrusion commands. The program displays up to four separate views at once, although you can edit only one at a time. If you wish, you can extrude objects to form 3-D entities. Another powerful set of commands, Transform/Revolve/Sweep (similar to the Mold/Sweep/Spin command in Impulse's Imagine), allows you to create complex shapes. The 3-D mode also lets you scroll, zoom, and rotate objects.

A litmus test for any Amiga CAD program's usefulness is how readily it exchanges files between platforms. Not only are DynaCADD's DXF import and export routines flawless, but they are also easy to use. We took DXF files created in AutoDesk's AutoCAD (versions 9, 10, and 11) and loaded them into DynaCADD's 2-D drawing screen via Commodore's XT-compatible Bridgeboard. The procedure went off without a hitch, thanks to DynaCADD's integrated translator.

With many conversion utilities, as with foreign language idioms, some things are lost in the translation, and some entities will not convert. DynaCADD's DEF (DynaCADD Exchange Format), however, allows the seamless transfer of drawing databases between DynaCADD's IBM and Amiga versions. In addition, you can output to PostScript and many plotter and printer devices.

With DynaCADD's interface, dimensioning is a breeze, and the program provides you with all the options and accuracy you could possibly want. The dimensioning formats are based on the American Society of Mechanical Engineers rules—tailor-made for serious document production. (European DIN support is also provided.) The package covers every conceivable condition and offers a wide choice of easy-to-select dimension parameters.

For all of DynaCADD's superb features and organization, however, I do have a few complaints. The first is the dongle. If your startup-sequence loads the AMouse driver for the Bridgeboard, the dongle causes the program to load improperly, bypassing the DynaCADD dialog box and going directly to the drawing screen, so that the pull-down menus are dysfunctional. Even when the AMouse routine failed to initialize, the program's hatch routine did not perform as expected. I got around this hatching error by removing the "RUN NIL PC/AMouse" line from the startup-sequence.

My second complaint involves a feature covered in the reference manual but not implemented in the Amiga version. You cannot abort the hatch command by clicking the right mouse button. If your hatch scale is very small in relation to the drawing scale, you are in for a long wait while the hatch renders. Ditek's technical support is aware of this and plans a fix. Also, it would be an improvement to be able to define the hatch areas by polywindows or other types of free-form area identification, instead of having to draw entities.

The scale command presented an- ►

other problem with regard to my application, because there is no provision for entering scale data. Instead, DynaCADD scales the object by digitizing two screen locations to define a scaling ratio, a method not as accurate and straightforward as technical drawing requires. This routine would be vastly improved if it came with a pop-up calculator for numeric input. It would also be nice to be able to define the central scaling point.

Another feature that needs work is the stretching function. Many programs that let you stretch entities employ routines allowing you to anchor one end while you stretch the other. With DynaCADD, there are two methods. The standard stretch lets you extend the object equally from its origins—at the mid-point of lines and at the center of circles, arcs, and so on. In fact, stretching is a lot like scaling, allowing an object to change only in the "x" or in the "y" directions (although angled lines are stretched in both directions simultaneously and are even rotated about the origin).

An alternate method lets you insert predefined subfigures that you scale upon insertion. Of course, these must already exist.

There are a few other problems I feel need attention: the contiguous entity requirement for defining areas to be measured; the program's chain entity selection method; and the lack of an Attributes feature among DynaCADD's many modifier functions. Also, Ditek should expand the program's 3-D capabilities to include automatic hidden-line removal in isometric views, perspective-view generation, and solid-modeling features. For a future upgrade, Ditek promises a new 3-D module, plus support for ARexx, IFF and 3-D rendering formats. *(Editors note: Version 2.0 was due for release shortly after press time. Many new features—including 3-D rendering—were scheduled.)*

All that aside, while DynaCADD is not perfect and is a bit expensive, there is simply no other Amiga program that comes close to it in terms of out-of-the-box usability, speed, or level of features. It is indeed a winner. With just a few improvements, DynaCADD could replace the CAD programs presently in use and give architects seamless transition between IBM and Amiga CAD platforms.

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By Sheldon Leemon

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Continued on p. 78.

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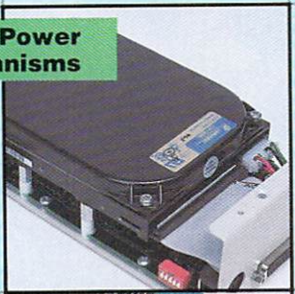


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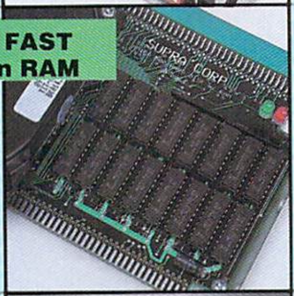
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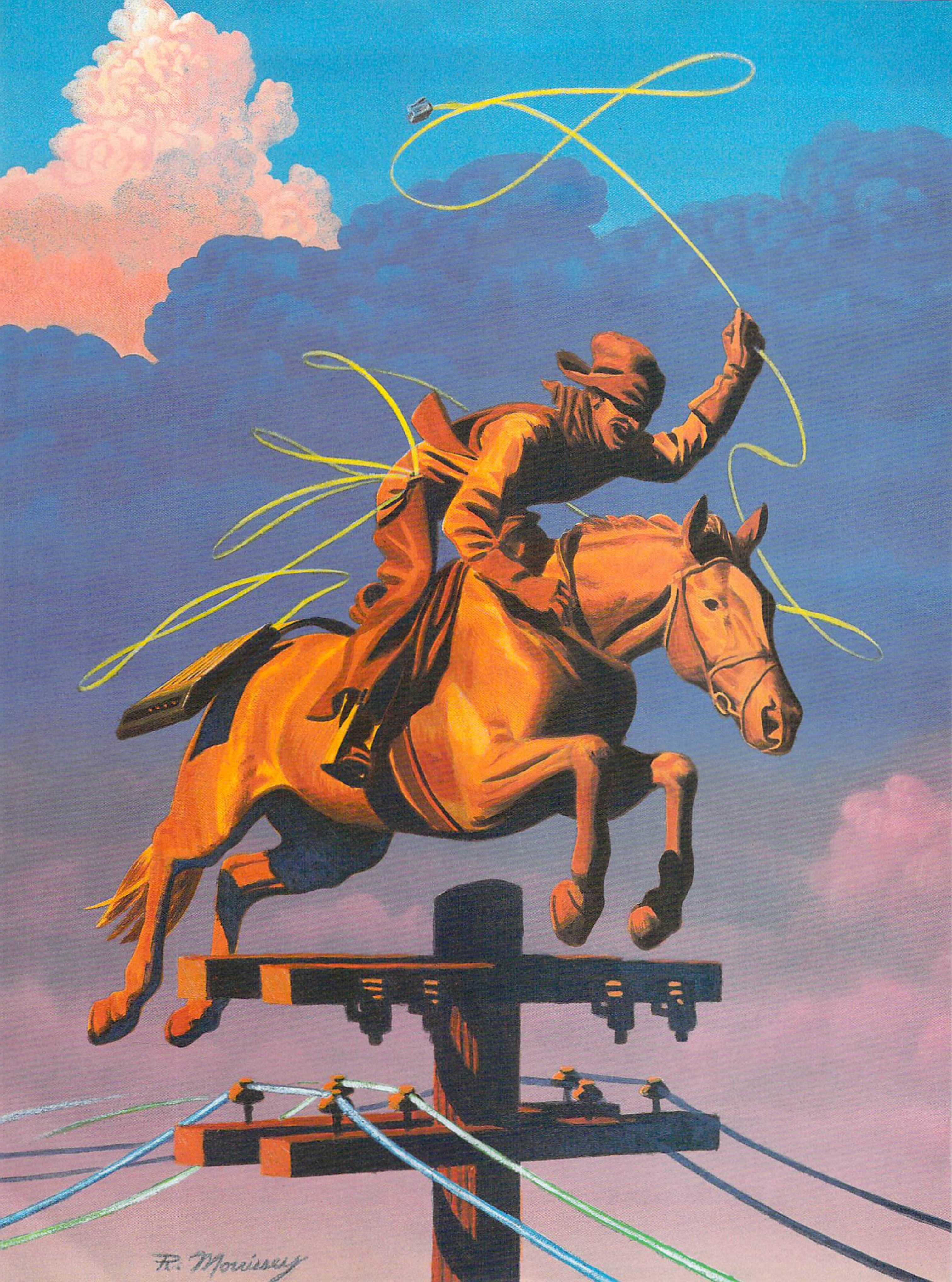
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TELECOMMUNICATIONS AMIGA STYLE

Riding the Telecomm Range

Whether you're a full-fledged telecowboy or just fixin' to have a little fun come Saturday night, join us for this two-part roundup as we circle the wagons around what's new and different in both Amiga communications equipment and network services.

TO GET STARTED on this communications cattle drive, you're going to need to be outfitted with the right provisions: a good modem, terminal software, an understanding of transmission protocols, maybe some archiving (file-compression) utilities, a familiarity with (and memberships in) some major networks, and a good nose for the local BBS/users'-group services in your own area. While our telecommunications scouts in the following two articles can't give you the A–Z basics in every aspect of all the areas above (they would need an entire issue to include *everything*), they are going to cover some new ground in the communications field that should benefit both novices and more seasoned telecomm hands.

John Ryan will take you over to the modem shack for a look at some new equipment (including fax modems) and a quick course in what you need to know about getting hooked up properly on the hardware side. Since on-line Amiga guru Harv Laser did a big piece on communications software not too long ago in *AW*, we'll present a synopsis comparison chart of his evaluations and a reference to his very comprehensive coverage for further study. (In fact, you will find a box on p. 28 listing all recent *AmigaWorld* telecommunications-related articles and reviews for background help.)

Tim Walsh, *AW*'s regular network reporter, will then take you on an on-line tour of some of the off-the-beaten-track services offered by the networks. While Tim normally keeps you informed about what hot new programs are being put up for downloading, for this piece he'll concentrate on the other interesting offerings available on the nets—education, finance, entertainment, leisure, and some downright funky special-interest areas, too.

So let's break camp and get those electronic dogies rollin'! ►

Have Modem, Will Travel

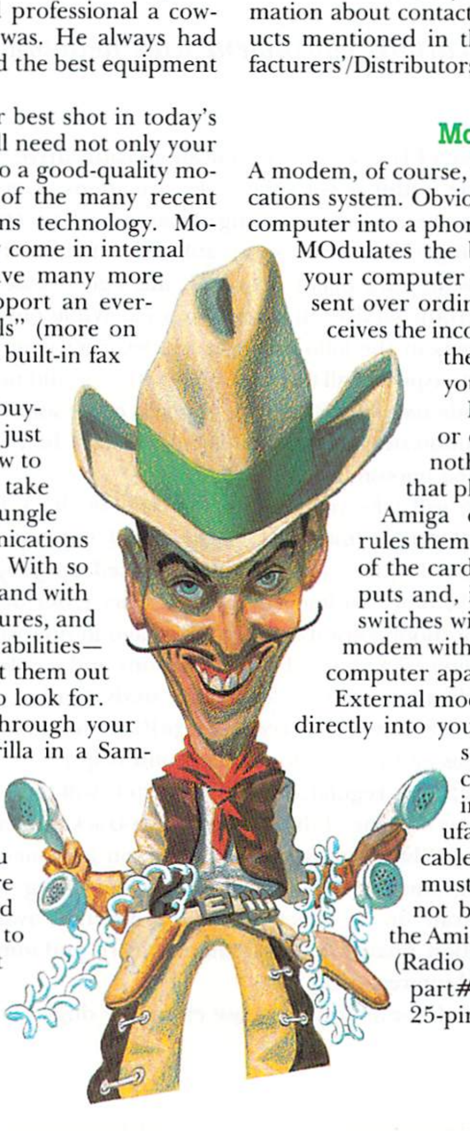
By John Ryan

IF YOU REMEMBER Paladin—the black-clad, black-horsed good/bad guy gunslinger with the famous calling card in the early days of TV—then you'll remember how meticulous and professional a cowperson this mean dude really was. He always had good clothes, a lot of smarts, and the best equipment available.

Well, if you want to take your best shot in today's telecommunications game, you'll need not only your trusty workhorse Amiga, but also a good-quality modem that can take advantage of the many recent advances in telecommunications technology. Modems are faster these days, they come in internal and external varieties, they have many more sophisticated features, they support an ever-increasing number of "protocols" (more on that later), and some even have built-in fax facilities.

If you've been contemplating buying a modem but don't know just what features to look for and how to evaluate their significance, let's take a look at the big picture. It *is* a jungle out there in the telecommunications field, make no mistake about it. With so many modems available today—and with such a wide range of prices, features, and manufacturer claims as to their abilities—it may be difficult for you to sort them out unless you know exactly what to look for.

So before you go barreling through your local computer store like a gorilla in a Samsonite commercial, do some research in advance. Make sure you consider what capabilities you want today and those you may want tomorrow. If you're going to shell out hard-earned money for a modem, you need to make sure that it's going to meet your needs well into the future. There's nothing more frustrating than purchasing a cheap 1200-baud modem, only to find out months later that a 2400-baud model would have saved you time and money. (For information about contacting the manufacturers of products mentioned in this article, consult the "Manufacturers'/Distributors' Addresses" list on p. 60.)



Modem Basics

A modem, of course, is the hub of any telecommunications system. Obviously, you cannot simply hook a computer into a phone line and dial away. A modem MOdulates the binary information emitted by your computer into analog signals that can be sent over ordinary telephone lines. It also receives the incoming signals and DEModulates them into binary bit streams that your Amiga can digest.

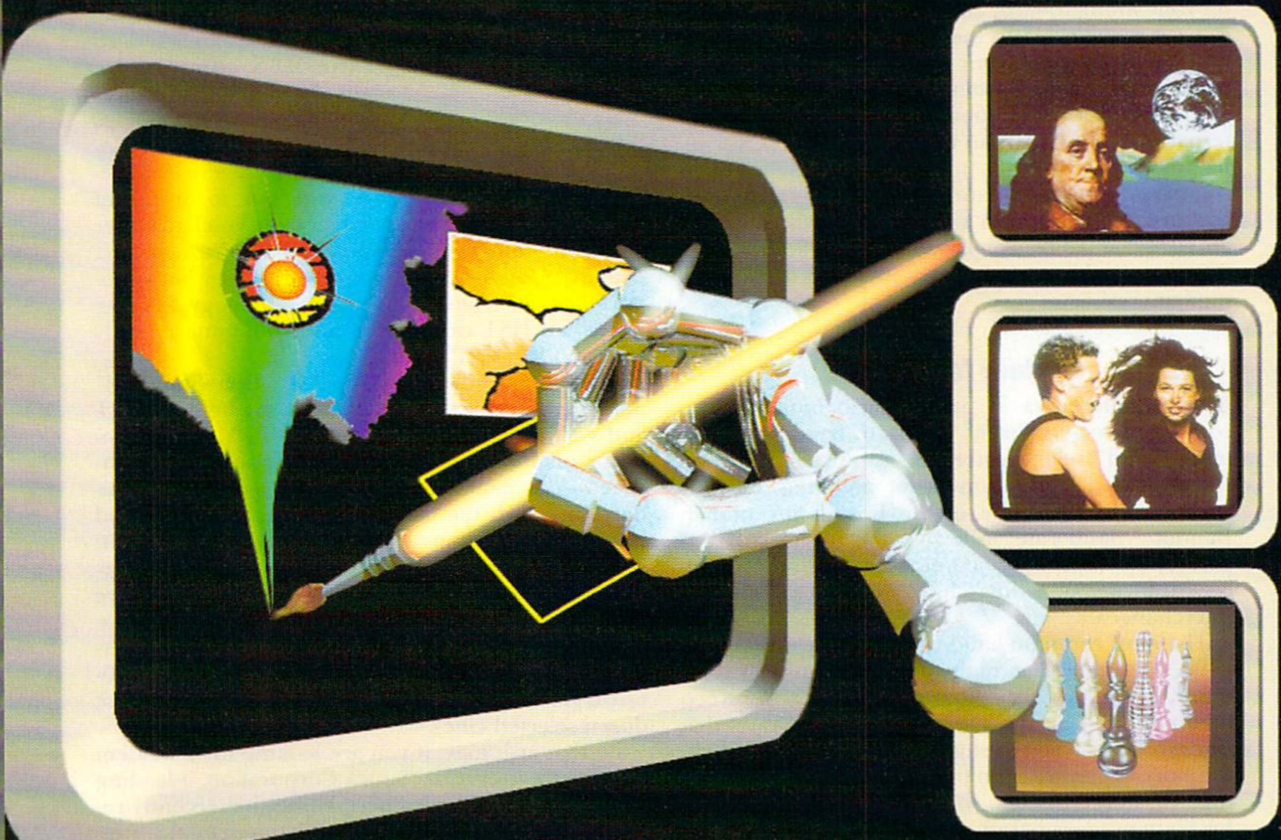
Modems can either be internal or external. An internal modem is nothing more than a circuit board that plugs into an open slot under the Amiga chassis (which, unfortunately, rules them out for A500 owners). The rear of the card houses telephone and line inputs and, in addition, usually sports DIP switches with which you can configure the modem without the necessity of pulling your computer apart.

External modems, on the other hand, plug directly into your computer's serial port via a serial cable. If you opt to purchase an external modem, keep in mind that most modem manufacturers do not include the serial cable with their products, so you must purchase it separately. It need not be an Amiga serial cable, since the Amiga and IBM cables are identical. (Radio Shack is a good place to start: part#26-240, six-foot serial cable with 25-pin female-to-male, $16.95.) ►

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While internal modems are good for clearing some of the clutter from your desk and are generally cheaper than their external counterparts, there are several inherent snags you can run into when using them. First, an internal modem has no indicator lights to inform you of such things as carrier detect, transmit or receive status, high-speed operation, or MNP-protocol activity (more on MNP later).

Moreover, an internal modem takes up precious slot space on your motherboard, and, because it is subjected to the heat that builds up inside your computer, its life span is often less than that of a comparable external modem. Lastly, an internal modem is specific to the computer. You cannot unplug the card and slap it into an IBM. If you already own an IBM-compatible, or if you plan on buying one, this is something to consider in favor of external modems.

The best modem in the world may seem absolutely useless unless you have a good terminal program to go with it.

A Need for Speed?

Besides differences in architecture, modems also communicate at different speeds, or baud rates. The term "baud" refers to the telegraphic transmission speed; it is not an acronym for anything, but was coined from the name of the French inventor J. Baudot. "Baud rate" refers to the number of bits per second (bps) at which modems can send or receive information—thus baud and bps are often used interchangeably.

The most common baud rates today are 1200 and 2400, although some high-speed modems can communicate at 9600, 19,200 or even 38,400 bps! Keep in mind that there is a law governing baud rates that is inexorably etched in stone: The faster the modem, the more expensive the modem. Like death and taxes, this will never change, so choosing the right speed for your needs is paramount.

Personally, I would recommend against buying a modem rated at less than 2400 baud, especially for Amiga computers. You will find that the graphics and animation files on most Amiga Bulletin Board Systems (BBSs) and commercial networks are *huge*, often hundreds of kilobytes or more. So while you may pay less for a 1200-baud than for a 2400-baud modem, your savings will soon erode after your first session on a long-distance BBS or a commercial network such as GEnie (which charges the same rate—currently $6 per hour—for either 1200- or 2400-bps access).

Most modems, high-speed or otherwise, can generally communicate with any other modem within a range of 300–2400 bps. In such cases, the operating standard is usually the Hayes, the quasi-official communications standard that is based on the modems manufactured by the leading modem maker in the entire PC field and adopted by the telecommunications industry at large. Just about every PC modem available today is Hayes-compatible, so you need not concern yourself too much with this unless you are buying an older modem from a clearing house or garage sale.

Regardless of the speed at which they are rated, almost all modems support transmission speeds that fall below their rating, meaning that a 2400-baud modem can also send and receive information at 1200, 600, or even 300 bps.

While 2400 baud has become the de facto standard in the BBS community, many hard-line enthusiasts are moving toward 9600-bps modems such as the US Robotics **HST** ($995). But before you opt to shell out $600–$1200 for a high-speed modem, you had better know one thing: A high-speed modem can connect to another high-speed modem only if they both support the same type of high-speed technology. In other words, an HST can dial up and communicate only with another HST at 9600 bps.

There are, however, so-called "Dual-Standard" modems available that can support, say, both the HST and v.32 communications standards. (V.32 is an international designation for a widely accepted high-speed—i.e., 9600-baud—telecommunications standard, in which the method of transmission is based on error-correction and compression techniques; v.42bis, referred to below, is also an accepted error-correction and data-compression protocol.) Here again, however, you are looking at a fairly hefty price tag. Also keep in mind that among the national networks, only CompuServe currently supports 9600-bps transmission, and offers it only in a couple of dozen selected cities.

Be that as it may, if you are looking for a modem that fits these criteria, Supra Corporation, a leading manufacturer of Amiga peripherals, has recently released its **Supra 9600/v.32/v.42bis** modem at a suggested retail price of $699.95.

More "Baudy" Than Their Ratings

If you have been modem shopping recently, you have probably seen advertisements in which some modem manufacturers claim that their 2400-baud modems can communicate at 9600 bps by using MNP-5 internal protocols or v.42bis compression techniques. This is an interesting proposition and one that could have significance for people who have high-speed transmission needs or who are looking ahead to the future. Let's look at the technology involved here and, more importantly, see if the claims are true.

The simple answer to the latter is, Yes. . .under certain conditions. Modems that support MNP-5 (Microcom Networking Protocol) and v.42bis rely on extensive error-correction and compression techniques that can pass data to other MNP-5/v.42bis modems at rates faster than the actual baud rate of ►



Amiga screens shown

the modem. In the case of an MNP-5 modem such as Applied Engineering's **Datalink 2000** ($189; $159 without MNP-5), rates of 4800 baud can be achieved as long as the receiving modem on the other end is also MNP-5-equipped.

MNP-5 gets part of its horsepower from its two-to-one data-compression techniques. If the receiving modem is not MNP-5-equipped, or if the files you are sending or receiving have already been compressed (through such archiving utilities as ARC, LHARC, PKAZIP, or ZOO), then you lose any speed advantage, and the modem falls back to 2400-baud throughput. (For more on archiving, or file-compression, utilities, see the "*AW* Telecomm Sources" box on p. 28 to refer you to the articles "Pack It In" and "The Squeeze Play.")

Similarly, with modems such as the **Supra 2400 Plus** ($239.95), which offers both MNP classes 2-5 and v.42bis, you can achieve compression ratios of up to 4:1, which may yield actual transfer rates of 9600 baud. But, again, the system you are calling must be able to recognize the v.42bis protocol, and the files you are sending or receiving must be in their uncompressed, or raw, state before you can realize the full speed advantage here.

Therefore, if you plan to send or receive compressed program files from BBSs and networks, you will probably not realize a big increase in speed from MNP-5/v.42bis modems. If, on the other hand, you work from your home or are connected to a computer elsewhere and regularly send raw data files back and forth, these modems may be just the answer.

Just the Fax, Please

Okay, so maybe you've just decided that a 2400-baud external modem with MNP-5/v.42bis technology is just the ticket for you. Now you're hip as far as the latest telecomm gear goes, right?

Well, not exactly. There's another new wrinkle. If you are using your computer in your business, then you know that fax is as much a part of the business scene as the water cooler and the typing pool were in the old days. And the fax phenomenon is not just limited to business. If you're a college student, you know that many professors routinely send and receive faxes in communicating with their students. In fact, if you look at all the merchandising literature that your credit-card company bombards you with each month, it seems that personal fax machines of all kinds are featured prominently in just about every catalog and brochure pack.

Given this kind of climate, you may be interested to know that modem/fax card combinations are becoming increasingly popular in the IBM world, and this popularity has finally begun to trickle down to the Amiga community. Fax modems are really two modems in one: On one side of the house is a 2400-bps full-duplex modem (full duplex indicates it can send and receive information at the same time); on the other side is the fax modem, which can send information in only one direction at a time (simplex).

Fax/modem combinations make a lot of sense for the harried business person because they eliminate several steps involved in sending a facsimile. Whereas without a fax modem you have to boot up your favorite word processor or layout program, create the document, print it out, and then send it through a mechanical facsimile machine, you can now do all of this without ever leaving the computer.

Most fax modems redirect the print function of an Amiga application to send the file through the modem instead of to the printer. Having the fax software in memory allows you to create and send your file from your terminal quickly and easily. If the fax modem supports ARexx, or if it supplies multitasking drivers, you can even send your fax along its way without ever leaving the application that created it!

There are actually two types of fax modems available: send-faxes and send-and-receive faxes. You can purchase the Datalink 2000 mentioned earlier with a send-fax option (add $39) that will transmit data to any group 3 facsimile machine. (Group 3 is the current top banana as far as fax standards go.) Transmission takes place at the same 4800-bps rate. The **Datalink 2000/Send-Fax** sports several outstanding features: 1D compression, internal phone book, transmittal journal, programmable hot-keys, assignable send times, and multiple distribution lists.

The premier fax modem available for the Amiga, however, may be Black Belt Systems' **ClickFax** ($449.95), a 2400-baud modem/9600-bps fax. Whereas the Datalink 2000 supports only 1D compression, ClickFax supports both 1D and 2D compression techniques. ClickFax appears to be a true 9600-bps fax that fully supports the Amiga ARexx function and can read transmissions from just about any mechanical or fax modem. On the modem side, it supports MNP levels 2–5. *(Editor's Note: Because we received the ClickFax modem only after this article had been prepared, it was not actually tested along with the other equipment covered here. Keep in mind that the description above is based only on the manufacturer's information.* AW *will present a full review of ClickFax in a future issue.)*

Making the Connection

There are, of course, several other pieces in the telecommunications puzzle that you need to be familiar with before you can make an informed purchasing decision on your modem: terminal software and, with it, transmission protocols. I would need another article to cover these in depth, so I will limit the discussion here to just a few basics. Check out the "*AW* Telecomm Sources" box on p. 28 for more information, especially Harv Laser's "Telecommunications Programs" buyer's guide, which gives a very comprehensive evaluation of leading commercial and PD/shareware terminal software. An abbreviated version of Harv's feature-comparison chart, however, *is* included with this article.

In many cases, the modem you purchase is only as good as the software driving it. To use the modem, you also need a terminal program to control it. "Terminal" is a holdover from the early days of computing when operators sat at "dumb" computer terminals hooked up to a mainframe via telephone or serial cables.

A terminal program effectively turns your computer into a dumb terminal and configures it so that it can talk to other remote computers that are also hooked ►

to a modem. While we cannot here cover the field of terminal programs thoroughly, as did Harv Laser's article, there are indeed a number of excellent packages available, both commercially and in the public domain. Programs such as A-Talk III, Baud Bandit, and Online! Platinum, as well as shareware programs such as JR-Comm and Access 4.42, all offer a variety of features that can make your telecommunications experience a lot more enjoyable. The best modem in the world may seem absolutely useless unless you have a good terminal program to go with it.

Before you upload (send) or download (receive) a file with your modem, you must select a "protocol" through which to do so. A protocol is nothing more than the method by which two systems talk to one another. Some people may think that a protocol affects the speed at which you can communicate, but this is only partially correct. Protocols operate on ►

10 Leading Amiga Terminal Programs

Program Manufacturer/ Author	Price	Protocols[1]	ARexx Port?	Phone Book Max. Entries	Chat/ Conferencing Mode?	Baud-Rate Range (bps)	# Macro[2] Keys Allowed	Clipboard Support?	Backscroll Review Buffer?	On-Screen Clock/ Timer?	CPS Speed Counter?
Baud Bandit v 1.52 *Progressive Peripherals*	$49.95	X, WX,Y YB, Z, B+	Yes	Unlimited	Yes	300–38,400	30	Yes	Yes	Yes	No
A-Talk III v 1.3e *Oxxi*	$99.95	X, XPR, WX Y, YB, Z, K	Yes	60	Yes	300–57,000	20	Yes	No	Yes	No
Online! Platinum v 3.03 *Micro-Systems*	$69.95	X, WX, Y YB, Z, K, B QB, S	Yes	40	Yes	300–57,000	20	Yes	Yes	Yes	Yes
VTX On-Line v 1.0 *MichTron*	$79.95	X, Y, K, B	Yes	64	Yes	300–19,200	20	Yes	Yes	Yes	No
Dr. Term Pro v 2.0 *Progressive Peripherals*	$69.95	X, WX, Y K, B	No	Unlimited	Yes	110–38,400	40	No	Yes	Yes	No
Comm v 1.34 *Dan James*	Free (PD)*	X, WX	No	44	Yes	300–9,600	20	No	No	No	No
AZComm *S.S. Patel*	Free (PD)*	X, Z	No	44	Yes	300–19,200	20	No	No	No	Yes
Access v 1.42 *Keith Young*	$25* (Shareware)	X, B+, Z	No	60	Yes	300–19,200	20	No	Yes	Yes	No
JR-Comm v 1.01 *Jack Radigan*	$30* (Shareware)	X, WX, Y Z, B+	No	9999	Yes	300–57,000	40	No	Yes	Yes	Yes
Handshake v 2.20B *Eric Haberfellner*	$25** (Shareware)	X, Y, YB K, XPR	Yes	20	No	300–19,200	6	No	No	No	No

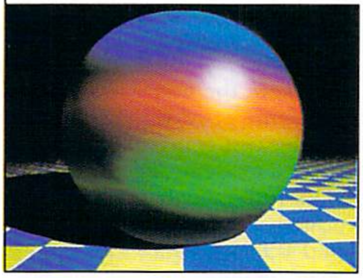
* Available on People/Link, GEnie, and CompuServe ** Available on People/Link and CompuServe

NOTES

[1] Protocol Abbreviations:

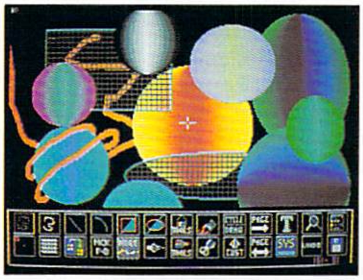
X=Xmodem/Xmodem-CRC WX=Windowed Xmodem Y=Ymodem YB=Ymodem batch Z=Zmodem K=Kermit
B=CompuServe B B+=CompuServe B+ QB=CompuServe Quick-B XPR=External Protocol Libraries S=Sadle

[2] Some terminal programs allow you to load a separate group of macros for each number in the phone book. The figures shown here indicate how many macro keys can be active at the same time through the use of various combinations of the function keys.

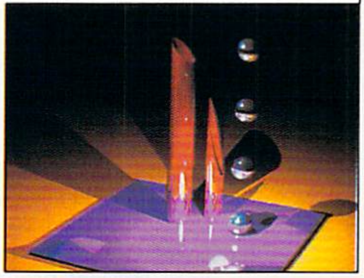


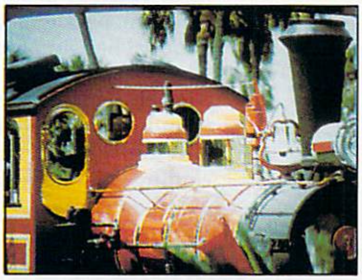


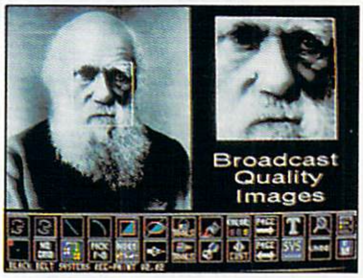











Broadcast
Quality
Images





efficiency. The more efficient a protocol is, the faster it can channel data to and from the modem.

Regardless of protocol, a 2400-baud modem still operates at 2400 baud, but it may not transmit or receive data as efficiently as it should. A protocol is basically an error-checking method that can be likened to two people talking on the phone. When one person speaks, the other must be able to understand what is being said. If there is a misunderstanding, the listener says, "Wait a second, say that again?" Protocols operate in the same way. One terminal speaks while the other listens. If the listening terminal misses something, it requests the data again until it either gets it right or times out. This is, of course, a very simplified view of how protocols work, but it should get the basic idea across.

For Amiga computers, Zmodem is probably the most efficient protocol available, and just about all terminal packages offer it. People/Link, a popular national hangout for Amiga on-liners, does not, however, offer Zmodem transfers. Instead, it uses a variant of the Xmodem protocol called WXModem (Windowed XModem) that gets the job done just as effectively. There are others you will run across, including YModem and CIS-B (CompuServe). Rest assured that if your particular terminal program supports a protocol, then your modem will support it as well. The trick here, though, is to ensure that the system you are dialing into also supports your protocols. All BBSs and national networks will inform you as to what protocols they accept for file transfer.

AW Telecomm Sources

ARTICLES

"Pointers" (faxing via terminal software/ARexx), Feb. '91, p.60

"Telecommunications Programs" (buyer's guide), Dec. '90, p. 47

"Pack It In" (archiving utilities), Aug. '90, p. 46

"Net Results" (Amiga networks), May '89, p. 30

"The Squeeze Play" (archiving utilities), May '89, p. 41

REVIEWS

Sterling Service BBS, Apr. '91. p. 88

DataLink 2000 modem, Jan. '91, p. 94

TeleTutor 1.4 terminal software, Oct. '90, p. 103

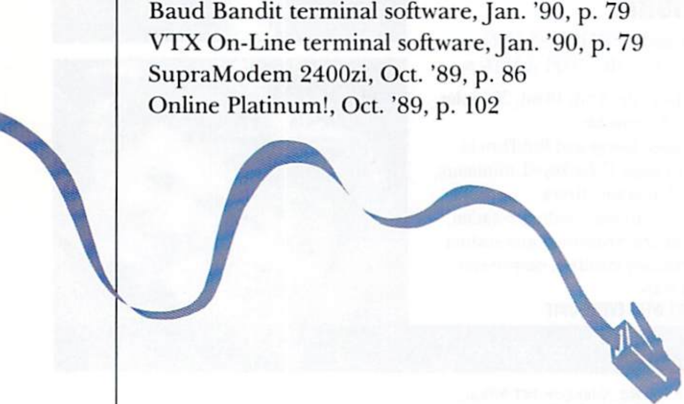
Fast FAX fax modem, Jul. '90, p. 14

Baud Bandit terminal software, Jan. '90, p. 79

VTX On-Line terminal software, Jan. '90, p. 79

SupraModem 2400zi, Oct. '89, p. 86

Online Platinum!, Oct. '89, p. 102



Null Fills a Void

While that essentially wraps up our look at modems and how they fit into the telecommunications picture, let's finish up with one last scenario where the best modem is no modem at all. "Null modems" provide another way to link computers, but in this case transmission occurs without passing through a modem. A null modem, or, more properly, a null-modem adapter, allows you to hook up two Amigas (or even an Amiga and, say, an IBM PC) and transfer data directly between them without ever dialing the phone. Of course, the two computers must be sitting next to one another in the same room (or perhaps in different rooms if you have a *very* long cable).

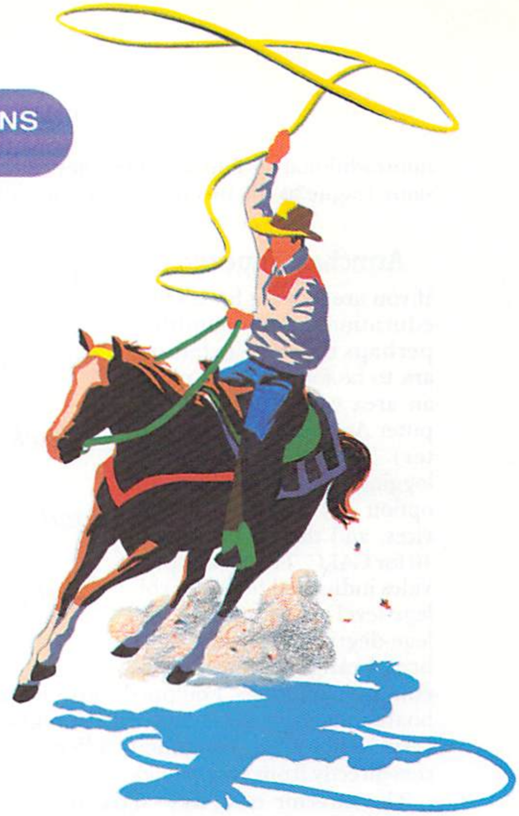
Why would anyone want to do this, you ask? Good question. Here are two good reasons.

I used to operate a joint Amiga/IBM BBS and needed to get Amiga files to my IBM hard drive. I found that the easiest way to do this (without a bridgeboard) was to connect the two computers via a standard serial cable and null-modem adapter. Then, by running a terminal on each computer, I could send my files to the IBM at very high speed. If you have occasion to do similar file-transfer chores, you will appreciate the fact that a null-modem connection allows you to easily transfer files at speeds of 19,200 to 38,400 bps, depending on the maximum baud rate of your terminal.

The other good use for null modems involves game play. Many war games and some flight/combat simulators allow for modem play. Falcon (Spectrum Holobyte), for example, allows you to call out on a modem and fly against another Amiga, IBM, or Atari ST that is hooked up to a modem. Games that offer modem options often include fast null-modem capabilities, as well. If you like spending an afternoon in furious combat, have a friend bring over his or her computer, place it back-to-back with yours, connect them with a null modem, and go at it! (You can purchase null-modem adapters at Radio Shack: part #2614-96, 25-pin male-female connector, $4.95.)

For most of you, however, your telecomm needs generally require the real thing, and the modem you choose can make a big difference. Buy the fastest modem you can afford, and ask the manufacturer about its warranties and whether the company offers free technical support—an extremely important consideration for the novice who may have a lot of questions while trying to get set up. And get a good communications package that can take full advantage of your modem's capabilities. With the right modem/terminal program combination, the world is as close as your telephone. ■

John Ryan is an Amigaphile and freelance writer who claims to be overworked and underpaid. As a telecommunications aficionado, he is busy attempting to make Biloxi, Mississippi, part of the Global Village.



On-Line Bonanza...
Via Offbeat Trails

By Tim Walsh

NO ONE WILL dispute that the favorite pastime of most Amiga telecomm cowpokes is settling in at the Ponderosa after a hard day punching dogies to download the latest and greatest PD and shareware. First as the "PD Prospector" and now as the "On-Line Scan" man in *AmigaWorld*, I've been bringing you my best picks from the Amiga nets every month.

While I'll continue to do that in the future, right now it might be fun—and maybe profitable—to run through some of the *other* interesting things you can do on line besides sending and receiving files.

Some of the activities offered by the networks are pretty mainstream, while others are more specialized or just plain peculiar. You can attend classes, play the stock market, meet other Amiga users, or go shopping, *and* you can also join special-interest groups (SIGs), pursue esoteric hobbies, or participate in forums on arcane topics. Throughout all of this you can easily spend money faster than you thought was humanly possible.



Telecomm Culture

With the exception of perhaps BIX and People/Link, you could think of telecommunication networks as giant shopping malls that charge admission, let you browse around, and offer reference libraries, goods, and services. Like any shopping mall worthy of its corn dogs, the nets also double as a safe haven for people of unusual habits, hobbies, and interests. This kind of comparison, of course, leads to controversy and the inevitable rumors that the networks, like the big-city malls, are populated with a disproportionate number of social misfits, ne'er-do-wells, and other shiftless souls. Not so! Sure, we Amiga on-line types may not be your average bears, but variety is the spice of life. *Vive la différence*!

But, also like shopping malls, the networks are meant to appeal to everyone, too. And that means that using a network does not require you to be a skilled disciple of a complex telecommunications package. Even a rank novice with no computer experience can easily log on to a service and instantly incur enormous on-line expenses just like the rest of us!

So, which network among the "Big Four" (BIX, CompuServe, GEnie, and People/Link—see the box accompanying this article for information about contacting them) is the best for you? Tough question. Like the people who use them, individual networks are not easily labeled as being *the* choice for one particular type of user. However, if you are interested in more than just scanning for Amiga files on line, then two of the best networks are GEnie and CompuServe.

This is not meant to slight BIX and People/Link, which are well worth the price of admission because of the excellent Amiga support each one provides. But when it comes to offering noncomputer-oriented or ►

nontraditional on-line activities, they're just not in the same league as the two telecommunications giants.

Armchair Education

If you are looking for on-line educational opportunities, perhaps the most extensive are to be found on GEnie in an area called CALC (Computer Assisted Learning Center). To access CALC after logging on to GEnie, select option 13, Educational Services, and then select option 10 for CALC. The service provides individual tutoring, college-level courses (even a college-degree program!), and a broad range of continuing-education offerings. Equipped with a file area, bulletin board, message area, and course-registration area, CALC is like a mini community college that you can access directly from your Amiga.

While it won't guarantee you a part in the next Clint Eastwood flick, CS's Show-Biz Forum will give you the lowdown on the glitz-and-glitter game.

The director of CALC, Margaret Morabito, is no stranger to setting up education centers on networks. Nearly single-handedly, she created the original CALC program on the Quantum Computer Services telecommunications network as a way for people to attend college courses through unconventional channels. Now available on GEnie, CALC enjoys a large enrollment and widespread popularity and success.

There are also many other specific educational offerings to be found on GEnie. Check the menu under Educational Services (option 13).

While CompuServe does not have an on-line college per se, it, too, provides a wide range of individual educational offerings. Use the CompuServe TOP menu to select menu choice 9, Hobbies/Lifestyles/Education, and then choose option 10 from the submenu that appears. You will find numerous further subareas here, including reference databases such as the Academic American Encyclopedia and forums on computer training, education, educational research, and foreign languages.

Also included is Peterson's College Database (option 12 under Education), an excellent on-line college reference tool. Purely for my own edification, I looked up my old alma mater, Franklin Pierce College in New Hampshire, and found all the relevant facts in the listing to be accurate. (Peterson's also went on to inform me that the tuition had skyrocketed for the 1990–1991 year to a whopping $14,495!)

Let Your Fingers Do the Earning

Because of the immediacy of telecommunications, the networks are an ideal source of timely financial information. Both CompuServe and GEnie have a strong financial-services line-up.

On CompuServe, you will bump into more big business than you would on a stroll along Wall Street. From the CompuServe TOP menu, select menu option 7, Money Matters/Markets, for financial news, trading quotes, and other market highlights. Interested in dividends and splits? You'll find all the information there. How about Dow Jones & Company or the Dreyfus Corporation? They're there. Add to that list more menu options for financial forecasts, financial forums, financial interfaces, surcharge lists, market reports, index lookups, and multiple market/management research centers, and I think you begin to get the financial picture.

GEnie, too, is no slouch when it comes to big money. It offers a Financial Products area brimming with items. Select option 7, Finance/Business Services. From this area, you can access such subareas as the Dow Jones News/Retrieval, the Quotes Securities Database, the VESTOR 24-Hour Investment Advisor, the Charles Schwab Brokerage Services, the Schwab Investors' Roundtable, the Air Force Small Business Roundtable, *The Wall Street Journal* Mall Store, and the Investment ANALY$T, to name but a few.

Electronic Shopping Sprees

While spending your on-line dollars to help you make money on the investment front sounds prudent, you can really throw caution to the winds and indulge your spendthrift fancies with on-line shopping. Both GEnie and CompuServe offer "electronic malls" to help you consolidate what used to be a day's shopping on foot into just a few minutes on line.

GEnie includes more than 40 stores in its on-line mall, ranging from AT&T to Walter Knoll Florist. To access any one of these, select option 8 from the main menu, Online Shopping Services, and then press 1 to enter the GEnie Mall.

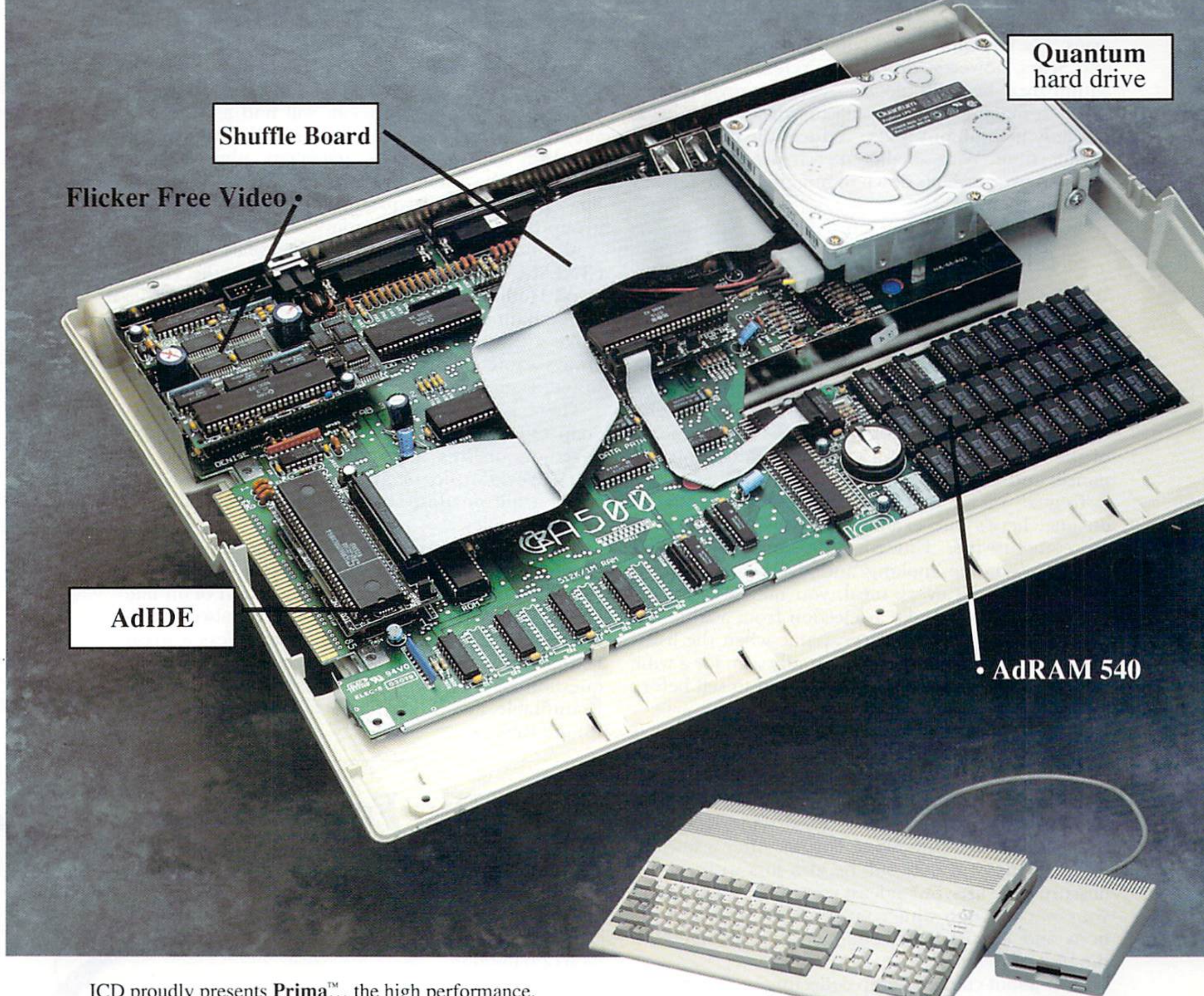
CompuServe offers even more opportunities, with 98 merchants in its mall. Select option 6 from the TOP menu and then press 1 to enter the Electronic Mall. If you want to spend your cash or credit on cars, books, computers, candy, or whatever, you will probably find a place to do it here. Disregard your blood-sugar level for a spell and visit Gimmee Jimmy's Cookies on CompuServe by typing GO GIM at any prompt. Further reduce the enamel on your sweet tooth by entering a free forum called Godiva Chocolates (type GO GC at any prompt).

Admittedly, on-line shopping can get pretty preposterous quite rapidly, even for hard-core shoppers with zany tastes. For instance, would you believe there's a free area on CompuServe called "The Squishy Wishy Zoo" (GO SW), where you will find ". . .a classic collection of stuffed toys, all guaranteed to be squishy wishy." (My copy of Webster's Ninth New Collegiate Dictionary does list "squishy," but not "wishy." I suppose that in the 1990s, neither reason nor correct English will stand in the way of teddy-bear sales.)

All in all, I would imagine that shopping by computer is not for everyone. You really need to know what you want and then barrel straight ahead without ►

Prima!

A Look Inside the Ultimate A500.



ICD proudly presents **Prima**™.. the high performance, low cost hard drive for Amiga® 500 computers. Prima blends a large capacity, low power Quantum™ hard drive with the **AdIDE**™ host adapter for an unbeatable combination.

Prima replaces the internal floppy drive but includes **Shuffle Board**™ to make your external floppy drive DF0:. **Prima** features auto–booting from FastFileSystem partitions, high speed caching, auto–configuring, and A–MaxII™ support. Formatted capacities of 52 and 105 megabytes are currently available.

Prima comes complete with instructions, software, and all the hardware necessary for a simple, clean, no–solder installation. It does require an A500 with switching power supply, 1 megabyte of RAM, and an external floppy drive for setup and installation.

What other products would we include in the "Ultimate A500"? Of course a four megabyte **AdRAM**™ **540** and **Flicker Free Video**™ with a multi–sync monitor. Why settle for less?

ICD

ICD, Incorporated
1220 Rock Street
Rockford, Illinois 61101
USA (815) 968-2228 Phone (800) 373-7700 Orders (815) 968-6888 FAX

Circle 31 on Reader Service card.

the aid of the physical presence of the desired object and helpful pictures, promos, and salespeople. At least with catalog shopping, you can visualize what a squishy-wishy beary-poo might look like in your kid's arms. The larger on-line retailers, such as J.C. Penney and Sears, however, do provide references to pages within their beefy catalogs so you can review items prior to making your purchasing decisions. This is not only helpful, but it also reduces the cost of your on-line time. With smaller merchants, though, the decision process boils down to hugging an imaginary teddy in the dark.

On-Line Strokes for Different Folks

With Special Interest Groups (SIGs) available on the nets on almost any subject from astronomy to window cleaning, you are bound to make friends and enjoy yourself, no matter what kinds of unusual interests you might have. Some of these specialized on-line activities are difficult to classify because they cover a number of different interests and overlap with some of the broad area headings such as Education, Finance, and the like.

To give you an idea of the kinds of things offered on line, here's one example that involves learning more about wines. Unless you live on the farm and eat Mom's home cooking and drink milk from a nearby cow with every meal, you may occasionally be called upon to make a selection from a wine list. A great many folks, however, panic when the list is handed to them, and they will rapidly scan for a wine that Orson Welles vehemently refused to sell before its time.

Well, if you have a CompuServe account, there is no reason not to be social and rub phonecords with folks in the Bacchus Wine Forum. Simply select option 9 from the TOP menu, Hobbies/Lifestyles/Education, followed by option 1, Food/Wine, and then option 2, the Bacchus Wine Forum. After a few on-line sessions, you may still be at a loss with certain obscure wine lists, but at least you will be able to bluff your way through wine conversations at social functions and discuss body, bouquet, and vintage with the best of them.

How about coin or stamp collecting? Join CompuServe's Coin/Stamp Collecting Forum (GO COLLECT). Want to find out what the fruit shippers in Florida are up to? You can join Florida Fruit Shippers (GO FFS) and talk about grapefruit or whatever else the citrus crowd gathers to discuss.

From personal experience, I have noticed a profound interest in astrology among many long-time Amiga owners. By typing GO ASTROLOGY once you have logged on to CompuServe, you can be whisked away in hyperspace to the Astrology Calculator. Enter your birthday, followed by the latitude and longitude of your birthplace. In return, you will see displayed on your screen geocentric planet positions, house cusps, ruling planets, and maybe even the price of pork bellies in Chicago at the time of your birth.

Stars and starlets alike will no doubt be interested in getting a CompuServe account, too. While it won't guarantee you a part in the next Clint Eastwood flick, CS's ShowBiz Forum will give you the lowdown on the glitz-and-glitter game. Access this little gem from the Arts/Music/Literature area, which is under the Hobbies/Lifestyles/Education menu.

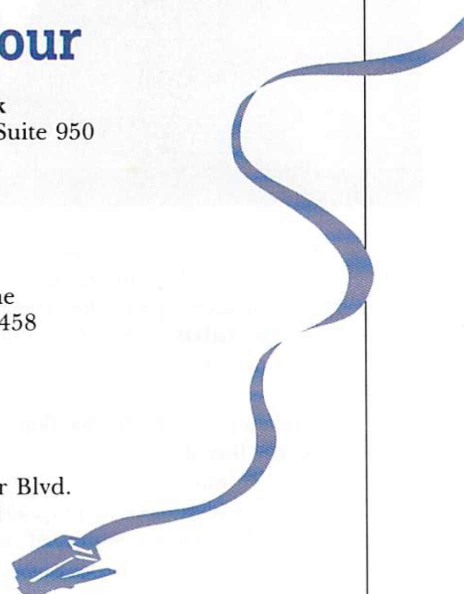
If you are a GEnie fan, there are also nearly limitless possibilities for on-line fun and frolic. Let's examine just one "small" area on GEnie called Hobbies & Leisure Interests. Select option 12, Leisure Services, from the GE Information Services menu to get you to this area. Once inside, you will find a large and varied assortment of "roundtables" (GEnie-speak for SIGs) on such subjects as genealogy, photography, scuba diving, science fiction and fantasy. Try the Spaceport option if you are interested in joining a group on space and astronomy.

Also under the Leisure menu are such options as CINEMAN Entertainment Information, the Hollywood Hotline, Rainbow Electronic Reviews, and the GEnie Banner Maker, which GEnie states is used "to make a text banner to display anywhere." If you've always wanted to display "anywhere" for all the world to see, I guess Banner Maker is for you.

There is still plenty more within Leisure. Select Soap Opera Summaries if you are hooked on the dazed-of-our-lives set, or join the roundtable on MIDI/WorldMusic, or groups that cater to writers, aviation aficionados, and those interested in radio and electronics.

As they eagerly spend their parents' hard-earned money in the Leisure area, youngsters will find the Rocknet Entertainment News to be a kind of on-line MTV for the computer-minded. There is also the Pet-Net Roundtable (which, incidentally, offers a great text file consisting of the minutes of a meeting on the question of legalizing ferrets as pets), the Sports Roundtable, and (my personal favorite) the TeleJoke RoundTable. ►

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This still does not exhaust the possibilities within this one "small" area. The Leisure menu also sports some of GEnie's financial offerings, such as the Charles Schwab Brokerage Services and the Schwab Investors' Roundtable (both of which can also be accessed via the Finance/Business Services menu). There are also more specialized roundtables within such subareas as Hobby, Show Biz, Music, and Automotive. Under Automotive, for instance, you can find an on-line bikers' club. Hosted by its rather intriguing female "Motorcycle Editor" WING. RIDER, this club's files make for great reading, even if the mere thought of tattoos, leather jackets, and roaring Harleys frightens the bejeebers out of you.

While I could go on for several more pages, I think that by now you get the picture. If you have a computer, a modem, some credit left on your plastic, and an account on either GEnie or CompuServe (or preferably both), you can't miss finding more than just a few areas that are of interest to you.

Sign Off

There are a couple of other sources that you may find helpful in pursuing some of the more unusual on-line activities and services available through the networks. Two well-known books concerning the subject come to mind. Although it's out of print and somewhat out of date by now, *Confessions of an Infomaniac* by Elizabeth Ferranini (SYBEX; Berkeley, 1984) still ranks as one of the better books on the then-eccentric practice of exploring and socializing on the computer networks.

With the help of Nick Anis, the noted computer columnist John Dvorak has written a more recent book modestly entitled *Dvorak's Guide To Desktop Telecommunications* ($34.95; Osborne McGraw-Hill; Berkeley, 1990). Dvorak's book explores on-line opportunities in more depth than the first book, while still managing to keep the discussion in layman's terms. Although a PC enthusiast, Dvorak does include at least some specific Amiga coverage. The entire book, however, is general enough to appeal to telecomm users of all stripes.

While I would not make either of these books required reading before you establish an account on a network, they both do provide insights and ideas on finding novel ways to use networks. As with any sport, every bit of advance preparation is beneficial. Let the games begin! ■

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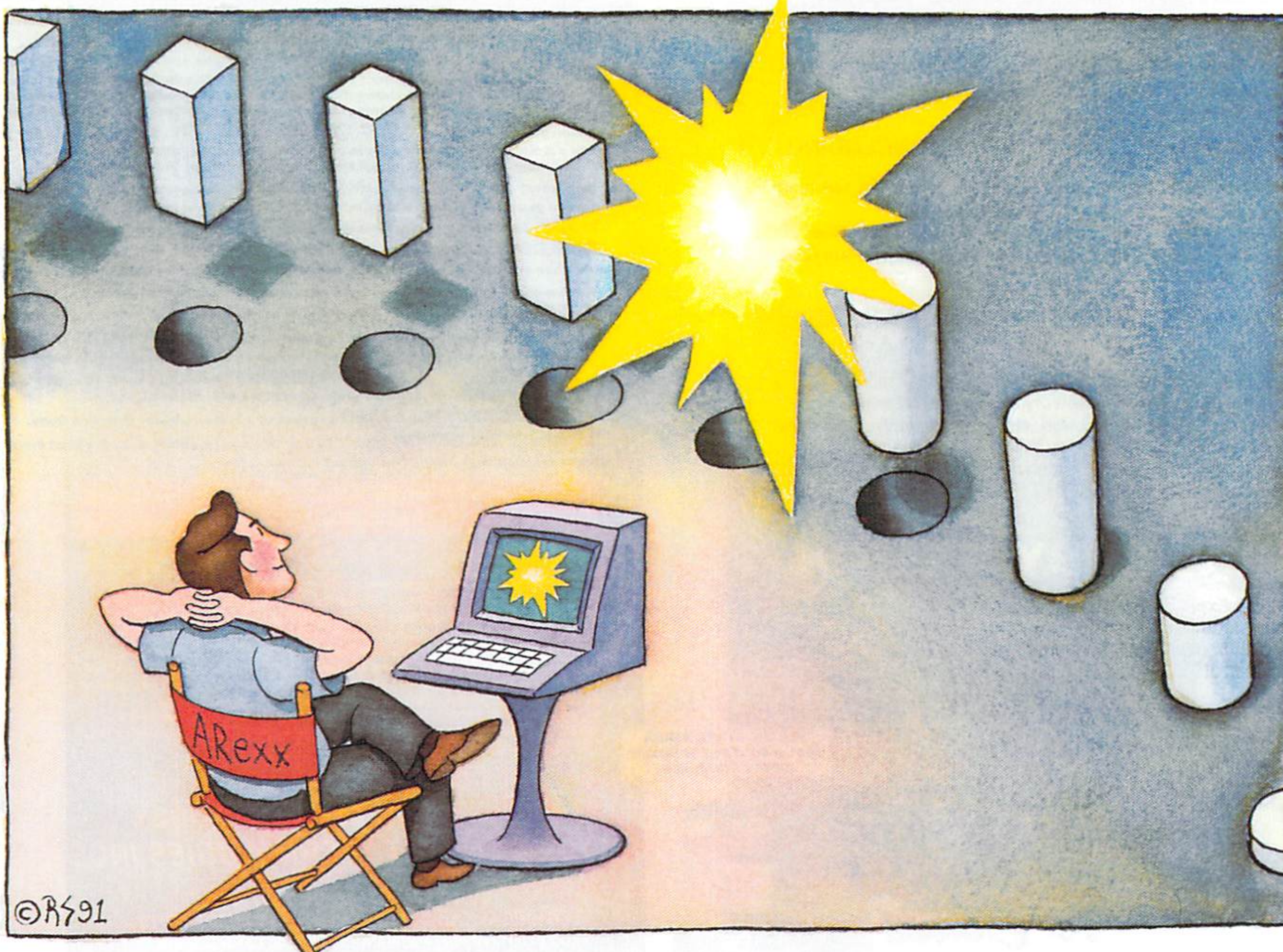
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*Here's an easy course on how to put the power of ARexx in **your** hands.*

legend among Amiga users. You have probably heard tales of its power and capability. Perhaps you've also heard that it's easy to use. Just maybe, though, you're not convinced that it's practical for you. "Yes," you say, "I know that ARexx can automate tasks and let me control programs from within other programs. But I'm no programmer. Isn't it beyond my abilities to tap ARexx's power?"

Whoa there! Don't jump to that conclusion. We're going to demonstrate how, given that you can manage to dress without putting your underwear on the outside, you can also create useful scripts and macros with ARexx!

ARexx has gotten its "easy-to-use" reputation from a number of features, one of which is its memory-management scheme. With other languages, you have to allocate and de-allocate memory the right way, at the right time, in the right order, and with the correct sizes. ARexx handles this automatically, so that you do not have to think about it. It closes all opened files and frees all associated memory when you exit an ARexx program.

Another advantage of ARexx is its kind and helpful manner. In many languages, errors and omissions often cause complete failure and offer no clue as to why. ARexx, however, reports errors in reasonably plain English and usually pinpoints the problem to a specific line of code. In fact, you can write ARexx routines to trap all errors, print important information from your program, and even restart the program itself. This powerful error-trapping capability, combined with its equally powerful TRACE error-reporting instruction, makes ARexx a perfect language to fool around with. And *that* is how you will learn to program in ARexx: by playing with it and either building your own ARexx script or trying to make someone else's do what you want it to.

One important provision of ARexx is that you can add to the commands it understands by using libraries. A common problem in trying to get other people's ARexx demos to run is the failure to load a needed library. This can be a confusing issue, because you need to load some libraries specifically, while others load automatically. Before you can use a function from a library, you must be sure ARexx knows the library is available. You need do this only once, preferably in your startup-sequence.

The following is an ARexx script that you can put in your startup-sequence to open the most commonly needed libraries for you. You don't have to worry about wasting RAM, because the libraries will not actually load until they are needed. At this point, do not concern yourself with how it works—just know that it does.

```
/* setup.rexx */

libs.1 = 'rexxsupport.library'
  /* extended functions (dos, etc.) */
libs.2 = 'rexxarplib.library'
```

By
Steve Gillmor
and
Richard Stockton

```
  /* intuition, windows, gadgets */
libs.3='rexxmathlib.library'
  /* sin cos tan and other math functions */

DO i=1 TO 3
  CALL ADDLIB(libs.i,0,-30,0)
  IF ~SHOW('L',libs.i) THEN SAY libs.i 'failed to open!'
END
EXIT

/* end of setup.rexx */
```

If you have ARexx installed on your system (that is, if you have purchased the software from William Hawes and are running it with Workbench 1.3, or if you use Workbench 2.0, which includes ARexx), then you have a rexx: drawer. Use a text editor or word processor to write this script, save it in ASCII format, and put it into that drawer. Then go to the CLI and type Ed (or the name of some other text editor you have) followed by sys:s/startup-sequence. When your startup-sequence appears on screen, find the line that reads rexxmast, and, a few lines down, add rx setup. Then when you boot your system, your startup-sequence will know to retrieve this ARexx script, which will automatically ready all the libraries.

Note that while we specifically open only three libraries in this example, several more must be present in your libs: drawer (in addition to those normally supplied) in order for these special libraries to load properly. You can find the latest versions of these libraries on BBSs and in public-domain collections everywhere. Check your libs: drawer to make sure it contains the following six libraries:

rexxsyslib.library	rexxsupport.library
rexxmathlib.library	rexxarplib.library
arp.library	screenshare.library

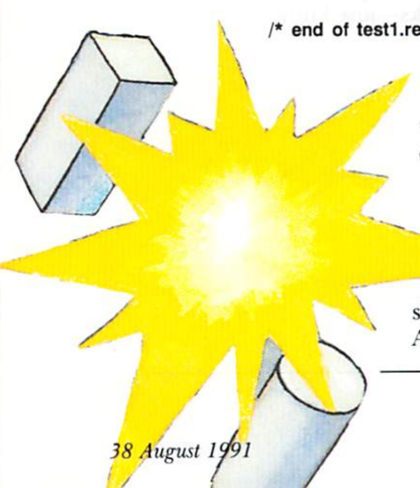
For Example. . .

The advice we usually give people interested in ARexx is to look at some examples. So, let's type in this simple example and run it (at a CLI prompt, type rx test1.rexx DF0:).

```
/* test1.rexx */

PARSE ARG drawer .
filelist=SHOWDIR(drawer,'File')
SAY filelist
EXIT

/* end of test1.rexx */
```



Once you have typed this in, you should see a list of the files (not directories)—separated by spaces—that correspond to the disk in drive zero.

How did all this happen? Lets break down test1.rexx.

The first two characters of an ARexx script must always be /*. These symbols signal to ARexx that what follows is an ARexx script. However, these symbols also serve as the left comment characters, and ARexx treats everything between /* and */ as a comment, regardless of how many lines separate them. A comment is normally used as a descriptive or explanatory note, but these symbols can come in very handy when you need to temporarily disable a line or two of code—just "comment it out."

Because ARexx uses the first /* to identify an executable script, this line is a logical place to put the script title. And so, test1.rexx is the title of your script or program. Because ARexx ignores blank lines, you can use them freely in your scripts to combat clutter. Now let's get to the good stuff.

The PARSE command is a kind of traffic cop of the ARexx language. In this case, PARSE ARG tells ARexx to expect an argument when the script is run. An argument is information that either you (the programmer) or an ARexx-linked application passes to the script by way of a variable. We will call the first argument (up to, but not including, the first space character) "drawer," and ignore any other arguments by assigning them all to the character ".". Because you typed df0: after the name of your ARexx program, the variable "drawer" is now equal to df0:.

Next, we store a list of all the files contained within "drawer" in a variable arbitrarily called "filelist." (It is always a good idea to use descriptive names for variables; when you look back at it a month from now, the name filelist will mean much more to you than "x.")

Then we display that variable using ARexx's SAY command, which acts like the AmigaDOS command ECHO, sending text to the console. Our resulting ARexx script is a simple program that's similar to AmigaDOS's DIR. Its output is not formatted in neat columns like that of DIR, but all the filenames are there, so we can use it to do some useful things. . .as you shall see a little later.

A Question of Tracing

Perhaps the most important command a new ARexx user can learn is TRACE ?R. The question mark puts the program into interactive mode, which simply means that it pauses after executing each instruction and waits for you to press the Return key before continuing. The R tells ARexx to display the *result* of each line of your program. (There are, of course, many other options, but ?R will get you started, and you can learn the others as you need them.) Let's alter our test1.rexx a bit, and insert TRACE ?R near the top so that it reads:

```
/* test1.rexx */

TRACE ?R
PARSE ARG drawer .
filelist=SHOWDIR(drawer,'File')
SAY filelist
EXIT

/* end of test1.rexx */
```

This time when you run it, you will see the tracing results in addition to the list of files. Let's examine it

as TRACE ?R executes it: one line at a time. We'll use df0: as the argument.

```
CLIorShell> rx test1 DF0:
```

Note that the script works whether or not you add the .rexx extension to the program filename. Here is what the output to your CLI or Shell will look like (the comments are ours):

```
4 *-* PARSE ARG drawer .;
  /* the line we are tracing */
>>> "DF0:";
  /* the "drawer" argument */
>.> " ";
  /* no more arguments */
>+>
  /* pauses until you press RETURN */
5 *-* filelist=SHOWDIR(drawer,'File');
  /* get a list of Files only */
>>> "DF0:";
  /* first argument for SHOWDIR( ) */
>>> "File"
  /* second argument for SHOWDIR( ) */
>>> "Disk.info system.info Utilities.info Shell Shell.info...";
  /* result */
>+>
6 *-* SAY filelist;
>>> "Disk.info system.info Utilities.info Shell Shell.info...";
Disk.info system.info Utilities.info Shell Shell.info tools.info .info
  /*filelist*/
>+>
7 *-* EXIT;
```

So, you take an argument from the CLI and assign it to a variable (drawer). Then when you press RETURN, the next line of the program executes. The SHOWDIR( ) function gives you a list of files or directories, or both, and puts the list into a new variable called filelist. In this case, the second SHOWDIR( ) argument (File) specifies just files. When you press RETURN again, the result of SHOWDIR( )—now the variable "filelist"—prints to the screen.

What does all this mean and how can it be useful? It means that you can watch ARexx do its work, live. If you have a broken ARexx program, you can see where it is going wrong and fix it. You can even change values in the middle somewhere just to see what will happen. Go ahead and experiment! Try running the script again, and in the pause after line 5, type:

```
>+> filelist="I changed it."
```

Then press RETURN twice. (Pressing RETURN the first time changes the variable; pressing it again executes the next program statement.) Congratulations! You have just altered the course of ARexx history right in the middle of an operating (well, paused) Amiga program! Can you feel the power coursing through your god-like fingers? "I am a programmer!" I hear you cry, and it's true: With ARexx, *everyone* can be a power programmer!

A Case in Point

The easiest way to create an ARexx macro is to start with an existing macro that approximates what you want to do. Use the examples that come with ARexx and compatible programs as a place to begin. They have already been tested and can save you a lot of set-up work. With that in mind, let's expand the earlier example to do something with the selected directory of files. To start, let's add a loop to handle each of the filenames in turn.

```
/* test2.rexx */

TRACE ?R
PARSE ARG drawer .
filelist=SHOWDIR(drawer,'File')
IF RIGHT(drawer,1)~=':' & drawer~=''
  THEN drawer=drawer'/'
DO i=1 TO WORDS(filelist)
SAY drawer || WORD(filelist,i)
  /* show full pathname */
END
EXIT

/* end of test2.rexx */
```

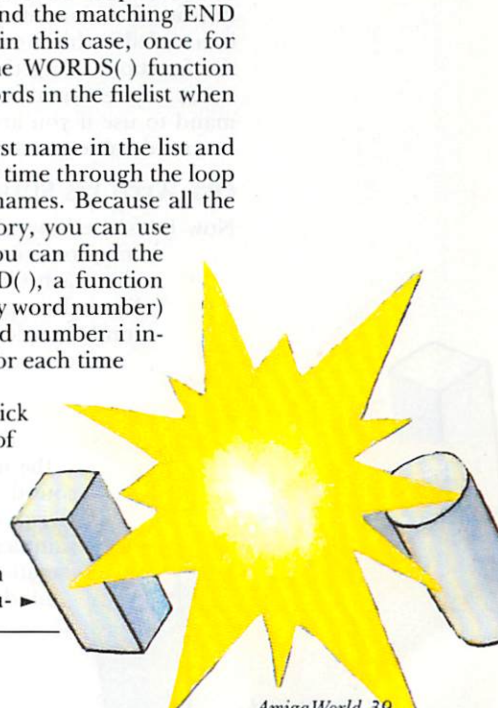
When you run this one, you get the full pathname of each file on a separate line. Now "comment out" the TRACE ?R using /* and */, save the script, and run it again to see the output more clearly.

Thus far, you have made two changes to the script. First, you check the last or right-most character of your drawer variable with RIGHT(drawer,1) to see if it is a colon (that's the ~=':' part). The & that follows means that another check occurs at the same time; the drawer~='' part checks to see whether the drawer is blank—which it would be if no argument was entered from the CLI. (The & is ARexx's logical AND operator. It lets you tie multiple conditions together, as in "IF this & that & those THEN. . ..") If the test results say that conditions are appropriate, the script tacks a slash (/) onto the end of "drawer," so that adding a name from the filelist will make this a full, valid path to the file.

The second change you made was in replacing the "SAY filelist" with a do-loop. A do-loop executes everything between the DO and the matching END a certain number of times—in this case, once for every name in the filelist. The WORDS( ) function counts the total number of words in the filelist when the do-loop starts.

The loop begins with the first name in the list and adds one to the count (i) every time through the loop until it runs through all the names. Because all the names are in the same directory, you can use "drawer" for every name. You can find the individual name using WORD( ), a function that returns a selected word (by word number) in a string—in this case, word number i incremented by a count of one for each time through the loop.

This script tells ARexx to stick each filename on the end of "drawer" using the double pipe "||" or concatenate operator. (Concatenate is the official techy way to say "stick these two things together with no spaces in between." It is usu- ►



ally only necessary to use between two variables, because, as demonstrated two lines before with drawer'/', a variable and a quoted string can simply be placed next to one another.) Without the inclusion of the concatenate operator here, the script would create a third variable rather than pasting together the two values.

Finally, the SAY command displays each filename on a separate line. You can "uncomment" TRACE to watch all of this in action.

This For That

Now that you have seen how these things work, let's expand the program to make it more flexible and to allow for more than just a listing. Just as you passed the drawer argument to your ARexx script, you can also pass arguments to functions that are defined within it. You can replace the "SAY drawer..." line above with:

```
"CALL myfunc(drawer || WORD(filelist,i))"
```

This executes a function called myfunc( ). It gets the same argument that SAY printed, that is, the full individual filename. Once you have made this change, add the following function definition after the EXIT statement:

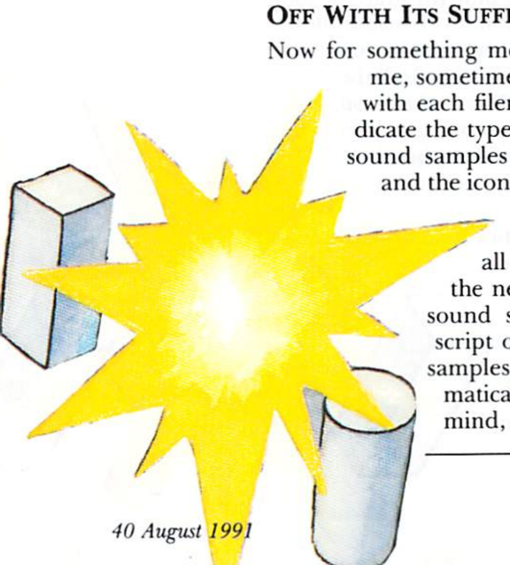
```
myfunc:
PARSE ARG thisfile .
SAY thisfile
RETURN(0)
```

The label "myfunc:" tells ARexx where the function starts. You can "PARSE ARG thisfile ." just as if you had gotten the drawer argument earlier from the CLI. The difference is that this argument comes from inside your do-loop. You can then display this one filename using the SAY instruction. RETURN tells ARexx where the function ends, and here the 0 serves as a signal that everything went well.

It is useful to have a function return some sort of error code so that you know within the script if the function has done its job properly. Because there is little to fail in this function, the do-loop just "CALL"s the function, using the CALL command, which ignores any returned value. CALL is the proper command to use if you are not setting a variable to the returned value of a function.

Off With Its Suffix!

Now for something more useful. Perhaps you, like me, sometimes get disks of sound samples, with each filename ending in ".snd" to indicate the type of file. Because I put all my sound samples in clearly marked drawers, and the icons take up more room with the additional characters, I would like a script to rename all the .snd files on a disk. Then, the next time I get a new batch of sound samples, I can just run the script on the new disk once, and all samples ending in .snd will be automatically renamed. With that goal in mind, I came up with this:



```
/* unsnd.rexx */

/* TRACE ?R */
PARSE ARG drawer .
filelist=SHOWDIR(drawer,'File')
IF RIGHT(drawer,1)~=':' & drawer~=''
  THEN drawer=drawer'/'
DO i=1 TO WORDS(filelist)
  errorcheck=myfunc(drawer || WORD(filelist,i))
  IF errorcheck>0 THEN EXIT(errorcheck)
END
EXIT


/*** FUNCTION ***/


/* rename .snd files. returns 0 for success, 1 for error */
myfunc:
PARSE ARG thisfile .
IF UPPER(RIGHT(thisfile,4))='.SND' THEN
  DO
    namelength=LENGTH(thisfile)
      /* length in characters */
    newfile=LEFT(thisfile,namelength-4)
      /* subtract the ".snd" */
    IF RENAME(thisfile,newfile)=1 THEN
      SAY '...Renamed' thisfile 'as' newfile
    ELSE
      DO
        SAY '*** Could not rename' thisfile'!'
          /* error checking */
        RETURN(10)
          /* something went wrong; stop, return a failure */
      END
  END
ELSE SAY thisfile 'untouched.'
  /* filename does not end in ".snd" */
RETURN(0)

/* end of test3.rexx */
```

This time the script *does* check the return value from myfunc( ) and puts it into the variable "errorcheck." Then if this value, and hence errorcheck, does not equal zero (zero meaning all is well), you can have the script stop before it does any damage. Note that this script is not capable of much damage because it acts only on files that end in ".SND". Now let us look at the function that actually does the work.

The first thing the script does after receiving the argument is to check the end of the current file (thisfile) for the presence of the characters .snd. Because these may appear as .SND, or even .sNd, the script converts the four right-most characters of the filename to uppercase and compares them to .SND. Notice how similar this is to English: IF the UPPERcase RIGHT-most four characters of thisfile equal .SND, then DO the do-loop until the END, or ELSE SAY the message that this file was not renamed.

Within the do-loop, two new internal functions are introduced: LENGTH( ) and LEFT( ). They do about what you would expect. LENGTH(string) returns the length of the string in characters, and LEFT(string,n) is the other side of RIGHT( ), returning the "n" LEFT-most characters of string. ARexx's powerful string-handling functions are yet another reason it is ►

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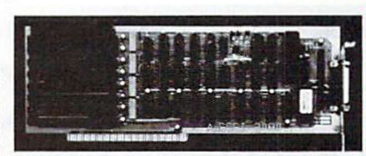
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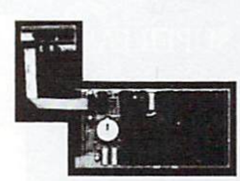
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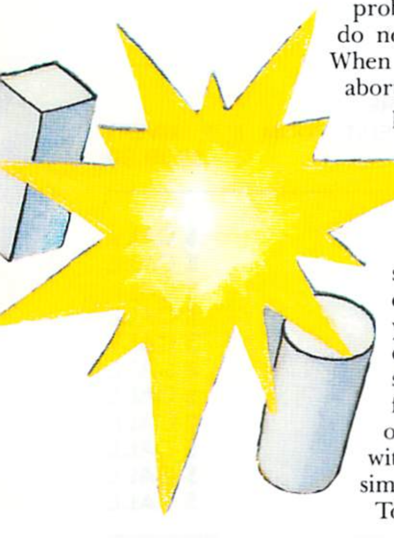
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more useful than the AmigaDOS script language.

The RENAME( ) function included above is one that requires the extra libraries our original script installed. Both RENAME( ) and SHOWDIR( ) are contained in the rexxsupport.library and the script will return uncompleted with an error ("Function not found") if the support library has not been added to the library list with ADDLIB( ).

Speaking of errors, note that if RENAME( ) succeeds, it returns a 1, so any other value indicates a problem. If there is a problem, you certainly do not want it repeated for every filename. When a function returns an error, the script aborts and displays the error number. At that point, you may want to turn TRACE back on so you can see what went wrong.



A Perfect Fit

You can go on and on tweaking this script until it fits just right. Because ARexx can return words as easily as numbers, you can, for instance, rewrite the main do-loop to return the "SAY" message instead of a number. By replacing the myfunc: definition with a subroutine of your own, you have a way to do what *you* want with an entire directory of files by using a simple "rx MyRexxPrg FileDir."

To continue your ARexx education, try extending one of the examples on the ARexx disk. Take a look at paver.rexx, for example. It opens a screen full of windows and writes some numbers in each. Not much use, huh? Wrong. If you need to display text in a separate window during your script, or need to send text to more than one window at a time, here is a fine example written by the author of ARexx, Bill Hawes.

Just extend his example to fit your needs. If you want to set up two independent windows to display two textfiles—line by line, side by side—to compare their differences, you will find much of the code necessary for this project right in paver.rexx.

As you can see, it is easy to get started with ARexx. And a simple ARexx script can save a whole lot of your precious time, over and over again. As you experiment, the TRACE command will demystify things for you, and ARexx itself will become your teacher, showing you how to use it in more and more powerful ways. ■

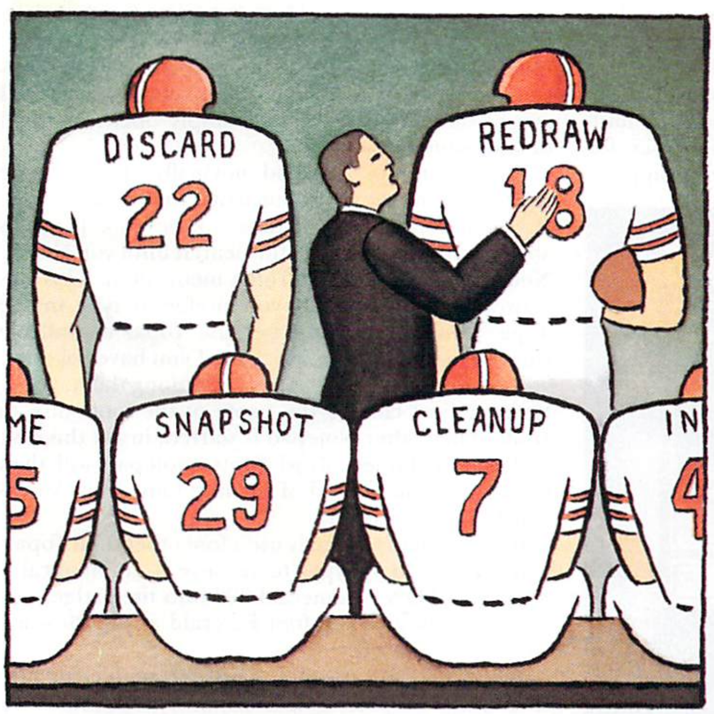
In addition to writing about ARexx, ***Steve Gillmor*** *has done much consulting on the topic. As Director of Software for Impulse, Steve has worked extensively on the company's ARexx-compatible authoring system, Foundation.* ***Richard Stockton****, generally regarded in the industry as one of the leading ARexx programmers in the country, has signed with AmiEXPO to hold ARexx master classes at upcoming shows. Richard is a cofounder of Gramma Software, a publisher of ARexx-compatible programs.*

HIDDEN TALENT

You may not know—or remember—all the abilities of your Workbench tools. Why not reacquaint yourself and get some of those bench sitters into the game?

By John Foust

YOU USE THE Amiga's Workbench every day. But how *well* do you use it? The chances are that you rely on just a handful of techniques for starting programs, changing gadget values, and moving files. A real Workbench "coach" uses these faculties, plus a few more. Workbench is not complex, but its stats are hidden in the Workbench manual, something many of us have not looked at in a long time. Instead of wading through that manual, let's find out how the more promising tools can help your game, and which ones you should retire.



THE MENU ROSTER

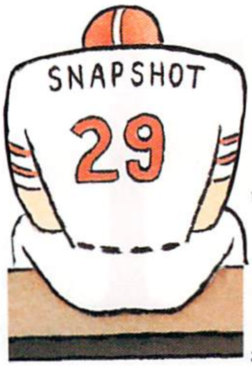
We'll begin with a quick remedial course on Workbench's menus. This will illustrate that although Workbench does hold hidden talent, you can wade through a fair amount of dead weight before finding it. Although we will speak in terms of Workbench 1.3, the tools discussed here are also available (sometimes under slightly altered names) on 2.0.

The left-most menu, entitled Workbench, offers the familiar Open, Close, Duplicate, Rename, Info, and Discard options. At least half of these are rarely used because the Workbench provides other, more effective methods of accomplishing the same tasks. For example, Open starts tools or projects and opens drawers that you have selected with a single mouse click. This is equivalent to double-clicking an icon; in fact, double-clicking is a far easier way to start icons. Close shuts the window of a selected drawer or disk icon, but it is likewise easier to close a window by clicking the gadget in its upper-left corner.

Duplicate copies files that have icons. Single-click the icon, choose Duplicate, and the file is cloned within the same drawer. The new file gets the old file's name, prefixed with "copy of." Usually when you copy a file, you want to put it on another disk. A better method of doing that is to drag the program icon from the source window to the destination. This makes a copy without adding a prefix to the filename.

Rename is one of the few Workbench commands that is more fully featured than its CLI counterpart. Workbench's Rename allows you not only to change a file's name, but also to change to the same name in a different case. With Workbench, for example, you can change a file named ACCOUNT to Account. ►

ILLUSTRATED BY JAMES STEINBERG



In the CLI, this is not possible—you are forced to rename the file to a third name, then back to the name with the case you want.

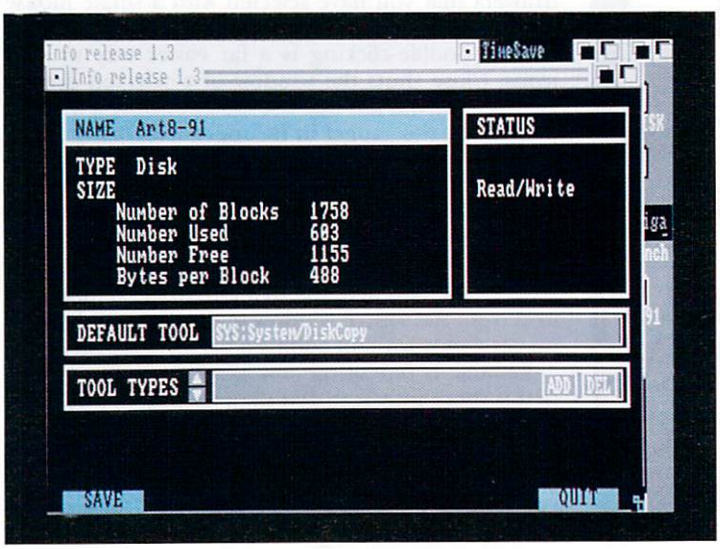
Info, which we'll discuss in detail in relation to other tools, allows you to change a window's attributes. Discard, which we will also examine later, deletes files from disk.

Workbench's Disk menu offers the items Empty Trash and Initialize. The Workbench's Trashcan icon is a special drawer, and a good place to hold files that you want eventually to get rid of. Selecting Empty Trash is the easiest way to empty that drawer; it actually deletes the files from the disk.

Although using the Trashcan icon and its companion Empty Trash may seem a more cumbersome process than simply using the Workbench menu's Discard option, it is often preferable. Why? Because using the Trashcan allows you to recover files you have placed in it—until you select Empty Trash, that is. On the other hand, clicking on an icon and then selecting Discard immediately and permanently deletes that file, drawer, or program from disk. Use Discard with care. And when using the Trashcan, don't forget to empty the trash every once in a while; a disk can fill up quickly with unwanted files that you have forgotten about.

Initialize, an indispensable tool, performs disk formatting—an operation that must be done at least once to every disk before you can use it. Clicking once on a disk icon and then selecting Initialize begins the process. But keep in mind that when you initialize a disk, any data on it is destroyed.

The right-most Workbench menu, called Special, holds the items Clean Up, Last Error, Redraw, Snapshot, and Version. To rearrange the icons in a drawer—in the order Workbench sees fit—select Clean Up after clicking once on the drawer icon. This temporary arrangement holds until you reboot. Once you have moved an icon to a new position, you can freeze it in place by choosing Snapshot while that icon is still selected. To permanently reposition multiple icons at one time (all the icons in a drawer, for example), position them as you wish them to appear, click once on each while depressing the Shift key, and then select Snapshot.



Get the vitals of any disk, drawer, or file with the Info tool.

Last Error and Version display messages in the Workbench title bar when you select them. Last Error shows you the most recent error message that Workbench received (if any), while Version shows which revisions of Workbench and Kickstart you are using, if you have any doubt. Finally, selecting Redraw refreshes a screen that has become visually corrupted.

Noteworthy

Workbench and the Extras disk hold many useful utility programs accessible by icons. Notepad, a simple word processor, can print text to any printer. If your printer accommodates graphics, Notepad can print in any Amiga screen font as well.

Notepad opens a small window on the Workbench screen, which you will probably want to move and resize. If you prefer a full-screen window, you can customize Notepad by adding settings to its Tool Types.

To change an icon's Tool Types, single-click the icon. Then choose Info from the left-most Workbench menu. When the Info window appears, click on the Add gadget at the lower right. A cursor will then appear in the Tool Types string-entry gadget. Here, enter "WINDOW=000,000,640,200" (the coordinates for the four corners of the screen) and press the Return key. Then click Save at the bottom left. Now, when you start Notepad, it will open a full-screen window.

The four magic numbers you enter into Info's Tool Types gadget give the left, top, width, and height of the new window, respectively. You must pad numbers less than 100 with zeroes on the left. Be sure to keep the sum of the left and width indicators to less than 640, as that is the number of pixels running horizontally across the Workbench screen. Similarly, the top and height values must total to less than 200 unless you have selected Interlaced mode in Preferences. Then, your limit is 400 pixels. If you exceed any of these limits, Notepad simply opens its small default window.

When loading, Notepad normally spends some time searching the Workbench disk for available fonts. If you add "FLAGS=nofonts" to the Tool Types as above, it will not conduct this search until you choose Notepad's Project Read Fonts menu item. This has a twofold advantage. If you prefer to type in the Topaz font, it saves time because Topaz is available without loading from disk. Also, if you have collected add-on fonts, you can easily swap among them. Using Rename, just change the name of the fonts disk to Fonts. Then, after Notepad is started, insert this disk and choose Project Read Fonts. Notepad will then search the disk instead of reading fonts from Workbench's Font directory.

If you want to regularly use a font other than Topaz, you can set Tool Types to retrieve it automatically. Entering "FONT=emerald.20" into the gadget, for instance, will give you font Emerald at size 20 when Notepad is started.

When a cursor appears in a string gadget such as Info's Tool Types, certain keystrokes can make it easier to change the characters. These tricks are nearly universal; they work in the string-entry gad-

gets of most programs, not just those of the Info window. The Cursor Left and Cursor Right keys, for instance, move between the characters. Holding down SHIFT and pressing either of these cursor keys moves the cursor quickly to one end of the string or the other. Holding CTRL and then pressing X erases all characters. In some string gadgets, the CTRL-Q key combination restores the contents of the string gadget to its original state before you began editing.

The Info window can also help you determine whether something will fit on a disk. Info works on both disk and file icons. In the upper left, it shows the size of the item in question, in both bytes and blocks. True file size is measured in bytes, but is rounded up to blocks for storage on disks. Floppy-disk blocks hold 488 bytes, and hard-disk blocks hold 512 bytes. When you select a disk icon, the Info window shows both blocks used and blocks free.

AND MORE

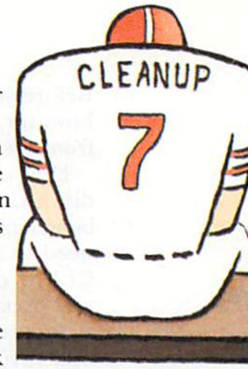
When it comes to viewing a file created in Notepad, the simplest way is to double-click on the file's icon. Doing this starts the Notepad program and loads that particular text file. If you click just once on the file's icon and then choose Info, you will see the Notepad program listed in the Default Tool box. That's how Workbench knows to start Notepad.

That may be the simplest way to look through a text file, but the fastest way is via the More program in Workbench's Utilities drawer. More starts more quickly than Notepad, but only lets you view the text file. You cannot alter the file in More. To change a file's Default Tool designation to More, bring up the file's Info screen. Once there, click in the Default Tool gadget and delete the word Notepad. Replace it with the string sys:utilities/more and press RETURN. Then click on the Save button at the lower-left corner of the screen. The next time you click on the text file, More will display it.

When you pick up a collection of files on disk, it is almost second nature to search for a ReadMe file, that is, a file that explains what is stored on it. You can make a user-friendly ReadMe file by combining what you now know about Notepad and Info. Then, when you give a disk of files to a friend, he or she can simply double-click the ReadMe icon to see a display of the instructions you prepared.

For this example, let's assume you have named your disk Reports. Using Notepad, write a short description of the files and then save it with the name Reports:ReadMe. Notepad will create an icon for your ReadMe file and save it to the Reports disk. Note that if the Reports window is already open, the ReadMe icon will not show up until you close and reopen the window. Now change the Default tool from Notepad to More. Next, drag a copy of the More program to this disk. That's it. You can test it by double-clicking your ReadMe icon. When you do, your instructions will appear in a window. Press RETURN to continue.

What if you don't like the looks of your ReadMe icon? In the Tools drawer of the Extras disk, there is a simple icon-painting program called IconEd that you can use to create a new one. Start IconEd and select Load Data from its Disk menu. Now enter Reports:ReadMe in the string gadget and then click Load Icon Image. The icon image will appear enlarged in the screen's editing box.



By picking colors from the Color menu on the left, you can change each pixel of the icon image. Draw the icon you want, then select Save Data from the Disk menu. There's no need to reenter the filename. Just click on Frame And Save and then click in the upper-left corner of the editing box. Move the mouse to the lower right, dragging the corner of the rectangle that appears. Click once again, and the image will be saved. (As with the original ReadMe icon, you must close and reopen the window to see your changes.)

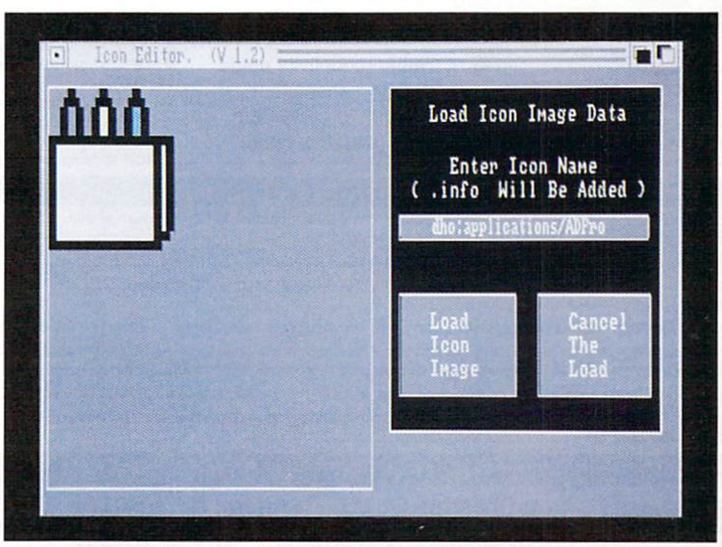
If you want to get fancy, you can make your icon image change (as with the lid opening on the Trashcan icon) when it is selected. Using the IconEd program, prepare two images: one for the way you want the icon to appear when selected, and the other for the normal unselected state. Save these with different names, perhaps Reports:ReadMe and Reports:ReadMe2.

Then open the IconMerge program, which is found in the Tools drawer of the Extras disk. This program needs four things: first, an "m" to merge two icons; then the filename of an icon for the unselected image; next, the name of the icon for the selected image; and, finally, a name for the resulting merged icon. If you enter Reports:ReadMe for the third name, the file icon will be replaced by a new dual-image icon. Now close and reopen the window to see it. A single-click on the icon will make the second image appear.

HEAVE HO!

You might think that because Commodore put a file on Workbench, the file is absolutely necessary for the safe operation of your Amiga. Not so! For example, Commodore officials are still searching for someone who has used the Edit program in the C directory. Edit is a text editor that takes cryptic text commands and operates only from the CLI. It also occupies 38 blocks on Workbench.

As shipped, Workbench has only 28 blocks free, but if you jettison rarely used files, it can hold more than 700 blocks (340K) of the software you use most. ►



You're not stuck with standard icons—create your own with IconEd.

Before you remove any files from your Workbench, however, be sure to make a back-up disk—and work from the copy.

How can you remove Edit from your Workbench disk? Unfortunately, you cannot do it from Workbench itself, because Edit does not have an icon. You need to drop down to the CLI. Open the Shell or CLI by clicking on one of their icons, enter CD C: and press RETURN. Then type DELETE EDIT and again press RETURN. If you own a file-management utility, you can use that to delete files and avoid the CLI altogether. Many programs of this type go by the generic name DirUtil. An example of one such commercial program is Progressive Peripherals' DiskMaster.



In the Workbench C directory, there are other programs that can go out the window. In alphabetical order they are: ChangeTaskPri, DiskDoctor, Eval, Filenote, Join, Search, Lock, RemRAD, Sort, Status, Version, and Which. You can also dump DiskChange without concern unless you use an external $5^1/_4$-inch floppy drive. The others, however, are rarely used. What's more, they are not accessible from Workbench, but require CLI proficiency. If the day comes when you *do* need them, you have a backup on your master Workbench disk.

Other candidates for deletion are extra fonts in the Fonts directory. If you and your applications are content with Topaz, there is little need to take up space with alternatives. Even if you use other fonts, though, it makes more sense to keep dedicated font disks, as explained in the Notepad example.

In the Prefs drawer, you might want to remove the extra Printer, Pointer, and Serial icons. These all start the Preferences program, but open different windows. CopyPrefs is not needed on every disk, either. The contents of the Utilities drawer can go if they do not look useful to you. The System drawer also has candidates for the bit bucket: FastMemFirst, InitPrinter, MergeMem, and NoFastMem are of dubious value to most people. If you have deleted everything in a drawer, remove the drawer icon as well.

Don't feel badly about dropping these programs from your lineup. They will enjoy a comfortable retirement on your master Workbench disk, and you will enjoy the space they free up on your working copy. Besides, you can always bring them back for an Old-Timers game.

Also, don't miss *AmigaWorld's* next talent-scouting expedition. We will hold it as soon as version 2.0 of the operating system is officially released. Watch for it, because 2.0 has some major players that are sure to improve your standing! ■

John Foust, president of Syndesis Corporation, deals with Workbench as both a user and a programmer.

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VIDEO SUITE



Time-Base Correctors

Improve your timing and stabilize your system

by choosing the right TBC.

By Michael Hanish

AS ANY VIDEO Toaster (NewTek, $1595) user will tell you, if you plan to combine output from multiple VCRs, you must use a time-base corrector (TBC) for each source. While good advice, this spawns some questions: Which time-base corrector? On what do I base my choice? And, what does a TBC *do*, anyway? The best way to answer these is in reverse order.

What Does a TBC Do?

The video signal carries timing information vital for successful picture creation. If these timing and synchronization pulses are damaged or unstable and you try to use the signal in your system, the image may fall apart, showing jitter, roll, color change, horizontal shift, or some other noxious artifact. While the problems may not show up on your monitor, they may become apparent in subsequent generations of tapes.

A TBC takes the incoming signal (from a VCR, for example), stores part or all of the frame, strips away the sync pulses, inserts stable sync, and passes the whole signal to the next device in the chain (switcher, VTR, digital effects box, and so on). TBCs come in two flavors, line-based (which process only a few lines of video at a time) and full frame-based (which process an entire frame at once). The older style, line-based TBCs are great for broadcast equipment, but have problems with industrial or consumer gear. Full-frame (infinite-window) TBCs, however, can correct virtually any video signal.

For two signals to be combined, as in a wipe or dissolve, the signals must be synchronized (genlocked) by establishing a master sync signal and then referencing the other signal to it. All the corresponding parts of each waveform must occur at the same time. To be useful in a multisource studio, a TBC must have the facility to accept and time itself (genlock) to an external "master" sync source. This facility is usually found as a "genlock in" (EXT-SYNC or REF-IN) port. Other ports may include video in and out, a second video out (for monitoring), black burst (or other synchronizing signal) out, and S-video and component in and out.

TBCs often feature a processing amplifier (proc amp) to facilitate color correction, timing and phase adjustments. If the video signals do not "hit" at the same time, the picture will be degraded because of changes in the phase relationships of the various parts of the waveform.

If the color information is out of phase, color frequencies will be shifted, sometimes producing radically different color values. When the vertical synchronization pulses are out of line, the picture will roll (lose vertical stability) at the transition or edit point. Discrepancies in the horizontal "timing" information manifest as picture shift. Proc amps generally allow for correction to sub-carrier and horizontal phase, as well as video, chroma, and set-up (black) levels.

A bonus on full-frame TBCs is freeze. At the push of a button or switch, the TBC displays a frame of video (or sometimes a specific field) from digital memory at the video-out port with no processing time or distortion. Because TBCs freeze each frame of video as it comes in from the source during normal operation, all the freeze function really does is stop the TBC and let you view the current frame.

On What Do I Base My Choice?

Before you buy a TBC, you need a basis for comparison. We tested several units to see how they "felt" to work with and whether they functioned cleanly from a technical point of view in a Video Toaster-based studio. The primary tests were done at Lyndon Productions, a Betacam SP, broadcast-quality, post-production suite at Vermont's Lyndon State College. (See p. 60 for product manufacturers' addresses.)

We used Betacam SP source tapes (known for outstanding image quality and multigenerational integrity) because we could easily verify the impeccably high quality of the signal and establish a reference level of the highest possible quality. Any changes to the signal would be the result of introducing a TBC into the signal path.

We patched the Toaster (in a seven-megabyte Amiga 2500HD) into the system before the switcher, fed it taped SMPTE color bars, and timed it into the system. To account for timing delays, we put a delay line on the Toaster's program output.

After we verified that the Toaster was in time and in sync with the system and ►

ILLUSTRATED BY CHRIS SPOLLEN

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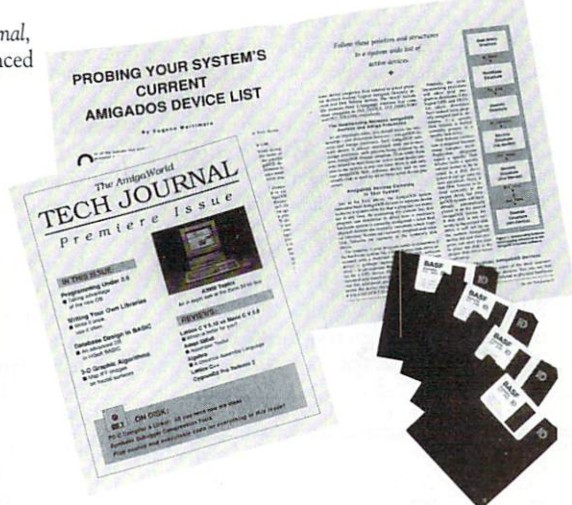
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was transparently passing the test signal, we ran a Betacam SP master tape through the Toaster, recording the results on both Betacam and professional-quality VHS decks. (A TBC is standard equipment on Betacam output and was used throughout the tests.) Both the test equipment (a waveform monitor and a vectorscope) and our eyes verified that the Toaster was not a measurable factor in passing the video signal: no degradation and no interruption of any timing or sync signals.

Why did we rely on our eyes? Sometimes a group of settings will produce a picture that is scope perfect, but a slight variation will give a more pleasing visual image. The eye must be the judge (assuming the monitor is calibrated and reliable). To that end, we did split-screen comparisons between the straight Betacam signal and the one that traveled through the Toaster loop. Even when we zoomed into both pictures using the ADO, there was no signal degradation visible by eye or by scope.

We used the following procedure on all the TBCs: Plug the unit into the system at the Toaster's Input 1; time and phase the Toaster loop into the system with the same SMPTE color bars; run the same master tape; record the results with a split screen (straight from the VTR and through the TBC/Toaster loop) onto both Betacam SP and VHS; and verify the visual impressions with results from the waveform monitor and vectorscope.

We tested a range of external, rack-mountable, fan-cooled units from ***FOR-A, Hotronic, I.Den, Microtime***, and ***Nova***, and did not experience any insurmountable timing or sync problems. Some units, however, presented more problems with adjustment and integration than others. All passed the signal with either no distortion or, as noted, with an acceptable minimum of artifacting. Unless otherwise noted, all the units had frame and field freeze, bypass switch, single-channel configuration, and proc amp controls (video, chroma, and set-up level, sub-carrier, horizontal and SC/H-phase adjustments).

WHICH TIME-BASE CORRECTOR?

First into the loop were FOR-A's **FA-300** ($3150) and **FA-425** ($5300). Although on average the most expensive TBCs evaluated, they are also near the top of the list in manufacturer's specifications, with 525 lines of resolution, 58 dB signal-to-noise ratio, and 4.2 MHz bandwidth (frequency response).

They hide all the proc-amp controls behind a hinged front panel, on the theory that you rarely need them after the initial setup. Each of the main controls has a toggle between unity (or preset) and variable gain, eliminating confusion over the knob position. All other controls are conveniently located and easy to adjust and operate.

The FOR-As, the largest and heaviest of the group, were also among the most competent and comfortable to use. They needed no additional delay beyond the baseline we established and produced no pixel defects, even under extreme zoom through the ADO. We all noticed a very slight bit of ringing at the VHS deck's output that was not evident at the baseline, but this might not be noticeable in many other systems. All in all, these were the Cadillacs of the bunch, well-built, high-priced units that will last.

I.Den's **IVT-7** ($2995) and the **IVT-9 Plus** ($5000) have the same manufacturer's specs as FOR-A's models, but differ in I/O options and proc-amp features. The IVT-7 (in addition to the standard list) includes a second composite-video out, Y/C in and out (4- and 7-pin), genlock in and black burst out, chroma and luma noise reduction, and a 5.5 MHz bandwidth. The IVT-9 Plus adds sepia and strobe freeze to the proc-amp controls (which have a preset/variable switch) and has component in and out.

On both, the proc-amp controls are behind a hinged door, but they seem more to punish than to aid the user. The knobs and adjustment screws are all too small to get at with fingers or screwdrivers, and it is difficult to tell from their positions where they are in the adjustment phase.

Control response felt sporadically touchy and overly sensitive. When we sent color bars through, they wound up looking noticeably dirtier than when the units were in bypass mode. We could not eliminate the fuzziness and chroma buzz with the proc amp, and one of the engineers wondered if the problem might be an artifact of the noise-reduction process.

Basic and reliable, Hotronic's **AF 75** ($2200) has easily operated controls and a few extra features. Three red LEDs on the front panel accurately indicate the video level, which helps when you adjust the control without scopes. Even better, the hue control

provides for more than 360 degrees of adjustment, whereas most units average 30 degrees of adjustment on the knob, with more coarse adjustments made by a tiny screw or a phase-invert (180 degrees) button. We removed the 72ns delay line at the Toaster's output in the test and easily provided that much correction at the Hue knob.

The AF 75 passed the signal cleanly according to both scopes and eye, and all front-panel operations, including field/frame freeze, felt solid and positive. Its noise level was about average (similar to the A2000HD's fan), but it ran much cooler than the others, possibly because of excellent heat dissipation through the sides. The unit won a warm spot in our hearts, like an old, reliable, rock-solid Dodge Power Wagon.

Nova's entries, the **810** ($3490) and **900S** ($4250), have all the standard features you would expect, but differ widely in performance and signal quality. For extra ports, the 810 has only S-video in. The unit's controls for input select, freeze, and preset and variable felt less than solid and were hard to use quickly. The output was within the acceptable range, but the chroma output was slightly noisy.

On the other hand, the 900S immediately felt like the Jaguar of the group. It has two S-video and two composite inputs and a 4x1 "hot" switcher, plus program and monitor composite, both 4- and 7-pin Y/C (S-video), and component. Front panel options, in addition to the switcher, include a color-bar generator, variable strobe, posterize, mosaic and fade effects, and a three-position LED video level indicator. The proc amp controls, while similar to those of the 810, have a more solid and straightforward feeling.

Everything we did with the 900S looked and felt great. The TBC was transparent on the scopes and to the eye, the effects were very clean, and the bonus of the switcher and color bars put this unit at the top of all our lists. Nova also has a solid warranty and service policy, no small consideration when a sizable chunk of money is involved.

By contrast, the Microtime **TX5** ($3295) came in at the low end of our collective rating scale. We were disappointed by the lack of presets in the proc-amp section, the unreliable feel of the controls, and the unacceptable level of noise the unit added to the signal.

The only internal TBC I tested, ***Digital Processing Systems*' Personal TBC** ($995), arrived too late to be included in the Lyndon tests. Instead, I evaluated it in an industrial-grade, closed-circuit TV facility, and verified the results and impressions in two other smaller studios.

Installing in an A2000 PC slot, the unit has composite in and out, reference video in, and a configurable input/output port. There is no proc amp; phase adjustments are done with a tiny three-position "momentary" switch just above the I/O ports. Sliding it to either side changes the phase relationship, which is then stored in non-volatile memory on the card. You do all configuration by moving jumpers on the card; the Personal TBC will accept S-video in (but won't output) if you change these.

Several units can also be genlocked together, providing, for example, four channels of genlocked, time-base corrected video inputs to the Toaster for under $4000. If you don't mind popping the hood on the Amiga to change configurations, this flexibility is well worth the saving in cost. There is also a freeze feature of a sort: when the video signal is interrupted, the unit displays and stores the last good video frame.

In several different evaluation situations, we had no trouble using the Personal TBC once it was installed and configured. It locked to external reference and passed the video signal through clean and with solid sync. It is the Volkswagon Beetle of the group, a solid performer without the bells and whistles. It is also a herald of TBCs to come: Impulse and Digital Creations are both working on low-cost, dual-channel internal units, and Vision Quest is promising a single-channel internal model.

Don't Just Take Our Word for It

When deciding which TBC is right for your video system, think about your development and expansion plans before considering the unit's price/performance/features trade-offs. Make sure you choose the proper one for your current and future equipment requirements. Research the products and always try before you buy. ■

Michael Hanish uses an Amiga for video, graphics, and music with both his performance group and his adult literacy students. Write to him c/o AmigaWorld, *80 Elm St., Peterborough, NH 03458.*



#30

A continuing series of tips, techniques, and tricks for creating more imaginative Amiga graphics.

By Joel Hagen

HAM Painting From A to Z

WHILE MANY "ACCENT" columns focus on individual techniques for achieving specific effects or results, a number of readers have requested an article detailing the entire step-by-step process of creating a finished painting. To that end, this month I will outline the method I used to create the "Ichthyosaur" illustration accompanying this column. My rendition of this extinct marine reptile, a HAM (Hold-And-Modify) mode painting done with Digi-Paint 3 (NewTek), took about three hours to complete.

FULL FATHOM FIVE MY SETTING LIES...

I first set up a 320x400 interlace screen, using Digi-Paint's default palette, and then cleared to dark blue for the basic ocean color. Using the Filled Rectangle tool, I laid in a gray foreground area for a sandy bottom. To accomplish this, I set the Transparency controls to the Horizontal Hotspot at the bottom of the requester. I set the Hotspot Transparency slider to 100% opacity (all the way to the top) and the Edge slider to zero (all the way to the bottom).

I then dragged out a rectangle the full width of the screen, extending it a quarter of the way up the picture. The sandy bottom stayed crisp in the foreground and faded into the distance higher up the screen.

To make the distant view recede into darkness, I switched to the Point Hotspot set near the center of the requester and used Filled Freehand in Darken mode with the same transparency settings. I outlined a flat-bottomed, oval area in the painting and let it darken to create an illusion of depth in the scene. To give a light source from the surface of the water, I set the hotspot at the upper edge of the requester, still using the same transparency settings, and switched to Normal mode using a light-blue color. Starting at the upper-left corner, I came down the left edge of the screen, described a rough oval through the middle of the painting, and wound up at the upper-right corner, where I released the button. The result is the apparent bright light source in the upper part of the picture.

Returning to Darken mode, I set the Hotspot slider to about 75% opacity and the Edge slider to about 25%. I drew quick seaweed shadows in the center screen to give the illusion of dense growth in the middle distance. I added rocks using Normal mode with center opacity at 100% and edge opacity at 50%. Reducing the opacity of the edges let the "water" color affect the edges of the rocks, adding to the illusion of depth in the scene. Underwater, things are less distinct in the distance and more affected by the color of the light filtered through the water.

With most of these forms, I experimented extensively with the position of the hotspot. Digi-Paint's powerful Undo and Repeat features allow endless experimentation with variations in settings. Once you have drawn a shape you like, you can change settings and employ Repeat to automatically redraw with new settings. (See "Accent," Jan. '91, p. 60, for details on working with the Repeat key.)

I added shadows to the rocks using Darken mode (see "Accent," Aug. '90, p. 58, for more on this technique) and then detailed them using the Unfilled Freehand tool and a small brush. I used Darken to add cracks and small shadows and Lighten to highlight the edges and surfaces that might receive light from the upper-screen source. Employing low opacity settings keeps the effects subtle. I used Colorize mode with low opacity settings to add a little light-brown and greenish-blue color to the gray bottom. Using Lighten mode and a small brush, I added tracings of refracted light patterns on the bottom and on the rocks to further convey the nature of underwater lighting. Using Filled Freehand in Normal mode, I painted the seaweed shapes in dark greens.

NOT YOUR USUAL "FISH STORY"

The painting still needed a focus of

Here's a step-by-step tutorial for creating a fully finished HAM painting in less than three hours.

interest. An ichthyosaur seemed like a good idea. To paint it, I switched to the spare screen by hitting the j key. I set opacity to maximum for both sliders and used Filled Freehand to trace the outline of my primeval ocean dweller in medium gray.

After a few tries, I had a satisfactory shape. I touched up the contour of the tail by carving away at the shape with black. In the Brush menu, I selected No Background and cut a brush of the ichthyosaur, removing it from the black background.

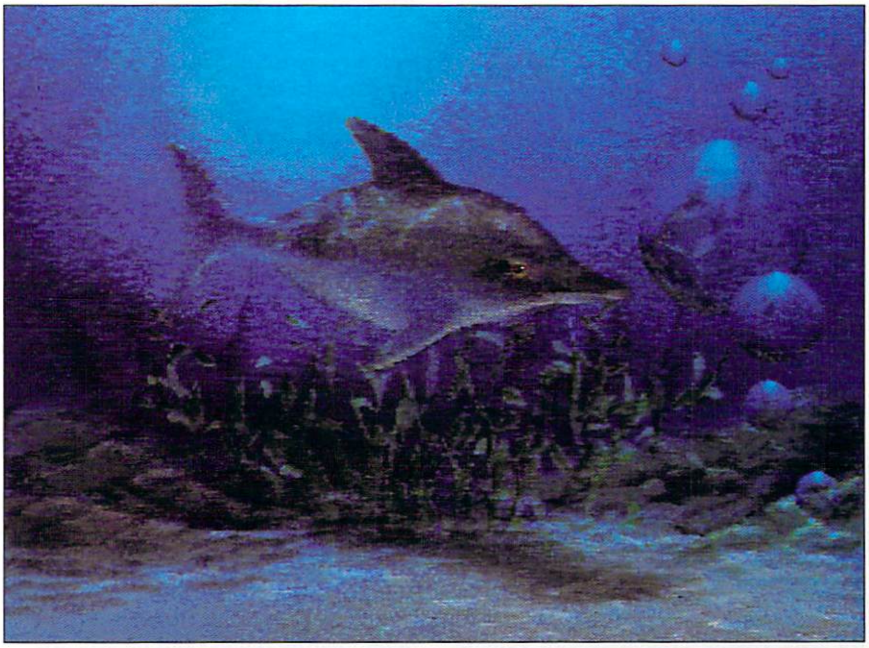
Switching back to the undersea screen, I stamped the brush in place, taking full advantage of the Control settings. I set the Vertical Hotspot at the far right with maximum opacity at the hotspot and 25% opacity at the edge. This let the foreshortened shape I had drawn fade into the water toward the tail. Again using Filled Freehand in Normal mode, I added dark volume to the back and light tones to the rounded belly.

Moving the Point Hotspot around allowed me to emphasize various edges and to define volumes. I used Darken with a small brush to add shadow detail and Lighten to trace refracted light patterns on the creature's back. A final "glaze" of blue at 30% opacity helped unify the colors and make the ichthyosaur recede.

Brushing in Bubbles

I then added the bubbles in the scene by cutting a large rectangular brush from the center of the screen to wrap onto spheres. First, I cut the whole screen as a brush, flipped it horizontally, and laid it down on the spare screen.

With this accomplished, I cut a large rectangle including the ichthyosaur, some bottom plants, and a little light surface color. From the Brush/Swap menu, I selected Copy This Brush to activate the TxMap (Texture Map) mode. Using TxMap, I set the Warp slider to the middle position and selected Filled Ellipse in order to draw the bubbles.

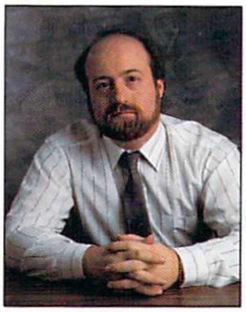


The finished HAM painting "Ichthyosaur" (above) employs a full range of Digi-Paint 3 tools and features.

The trick in creating bubbles is to set the Transparency sliders effectively. The Hotspot slider should be at zero opacity, and the Edge slider should be somewhere between 30% and 100% opacity. The Point Hotspot should be set toward one corner. Sometimes it helps to emphasize the bubble edge by using the Repeat function to lay a precise glaze of 10%–30% white over the bubble shape. You may also wish to add a soft highlight. Experiment with the Warp Hotspot: Moving it will change the position of image elements within the shape.

My painting was finished and the results seemed satisfying. I think you will find that Digi-Paint's interface is fast and intuitive, and that HAM mode allows for some very "painterly" techniques once you get the hang of controlling transparency. ■

Joel Hagen's credits include work in art, astronomy, science fiction, and software development. Write to him at 10512 Sawyer, Oakdale, CA 95361. Please include a stamped, self-addressed envelope for a reply.



HELP KEY

Lou is a lulu when it comes to giving you the lowdown.

By Louis R. Wallace

Keeping Count

Q: *I am having a problem with a professional AmigaVision touchscreen-based information system application I am creating. My problem involves the use of variables. Regarding my program's users, how do I keep a log of the number of times each subject is chosen and then store the information so that it can later be reviewed? What I am now doing is to use the Output icon and send a text string to a file each time a subject is chosen. That presents a problem, because there are many subjects, and with extensive use the files would grow considerably. There should be a more elegant way to do this. Is there?*

H. Haytsma
Miami Beach, Florida

A: Yes. The solution is to make use of AmigaVision's database feature to store the data. Create a database with a single record that contains fields for each subject you want to keep count of. When the program first starts, it should have a subroutine that will go to the database, open it and read into variables the value of each field. Then, each time a user selects a subject, the variable for that subject is incremented by one, thus keeping a running count of the number of times that subject was selected.

For storing the information, you have your choice of two approaches. One is to keep the information in memory until the application is instructed to shut down, updating the database before it finishes. That approach has the benefit of minimal disk access during the user's operation, but has the drawback of possibly losing the information if the system were to be shut down abruptly (as would happen with a power failure).

The second approach is to have a database update subroutine that is called every time the user makes the selection. In that way, your database is always up to date, and there is no chance of losing the information. However, depending on how much data you write to the disk, and how fast your disk drive is, there might be some minor delays for the user while the data is being stored.

Finally, in order to generate a report on the usage of your application, you can have an additional subroutine within the main program, or use a second AmigaVision program external to the main program. In either case, you would open the database, read in all the fields in the single record, and, using the Output command, send the information to a disk file, a printer or both as a properly formatted report sheet.

Other users of AmigaVision who are having problems figuring out ways of manipulating data would be well advised to study the database commands. In many instances, you can use a database in an unconventional manner to get even more functionality out of your AmigaVision programs.

A Worldwide Yearning For 2.0

Q: *I bought my Amiga in February with the hope that I would soon be able to use Workbench 2.0 on it. Here it is May, and still I can't find it. Being in Korea (I'm serving in the military) may be the problem, so could you perhaps direct me to a dealer or service center that handles my part of the world, or at least that can service users with APO addresses?*

J. Jones
APO SF 96271

A: Well, at this writing, AmigaDOS and Workbench 2.0 is still available only for users of the A3000. Commodore hasn't yet committed itself to a firm release date, although the latest rumor has 2.0 coming out in the third quarter of this year.

While I can understand your (and others') frustration, I must commend Commodore on the firm stand they have taken about not releasing 2.0 prematurely. It's my opinion that it wishes to have the OS both in a high degree of completeness (read: no bugs) and compatible with as much existing software as possible before committing the code to ROM. When it does become available, users will be happy to know that because of the extensive work CBM has done on 2.0, they won't have to rush out and get a new set of ROM chips every month or so—a very expensive proposition.

Just How Enhanced Is the ECS?

Q: *If I go ahead and upgrade my Amiga with the Enhanced Chip Set (ECS), will it give me higher resolutions or more colors?*

J. Johnson
Canton, Ohio

A: There is no increase in the number of colors available in the ECS; the total remains at 4096. The new Denise chip in the ECS does support a new screen mode that is 1280 bits wide, although it has a more limited palette than other screen resolutions, supporting only two to four colors. If you are using the 2.0 OS (available right now only on the A3000), you can open "virtual" Workbench displays that are larger then the visible screen. You access the offscreen areas by moving the mouse in the direction you want, and the display will automatically scroll to reveal that new portion of the screen. ■

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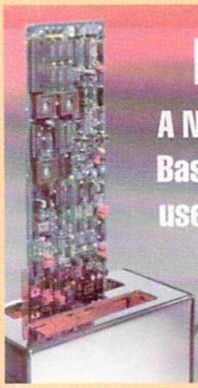
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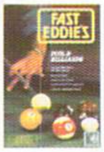
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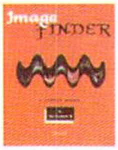
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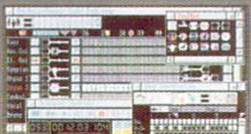


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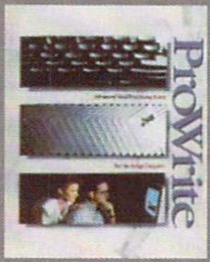


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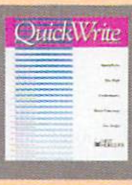


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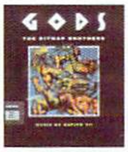
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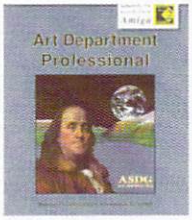


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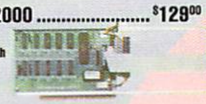
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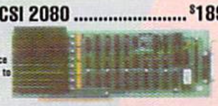
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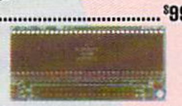
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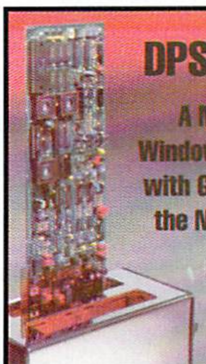
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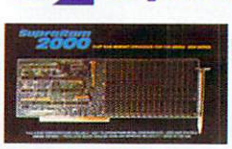
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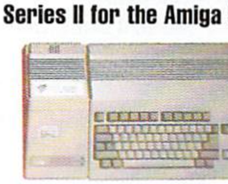
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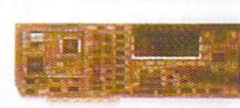
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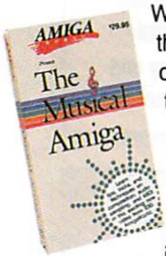
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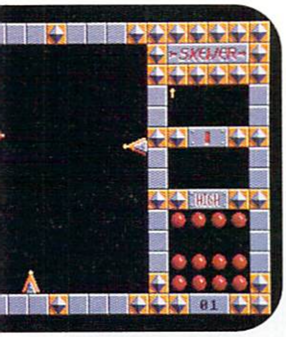
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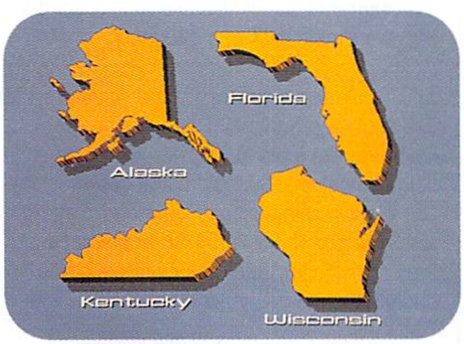
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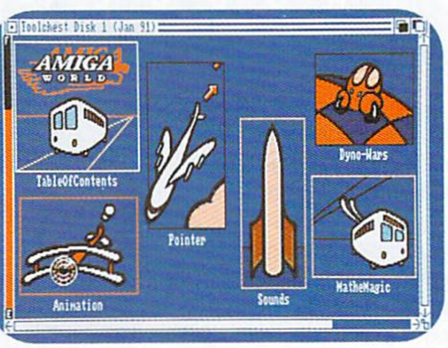


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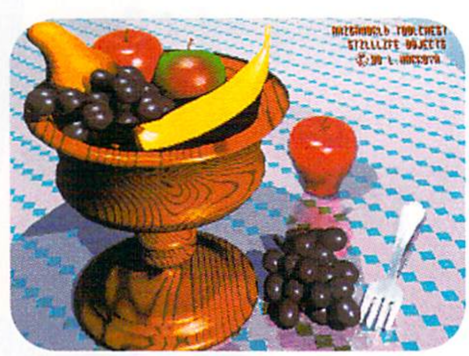
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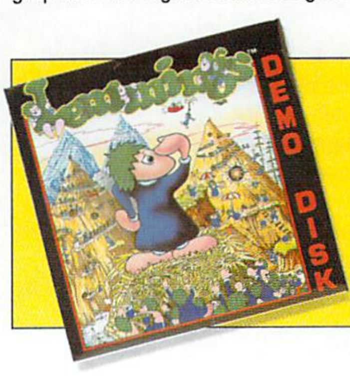


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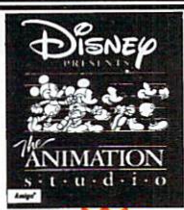
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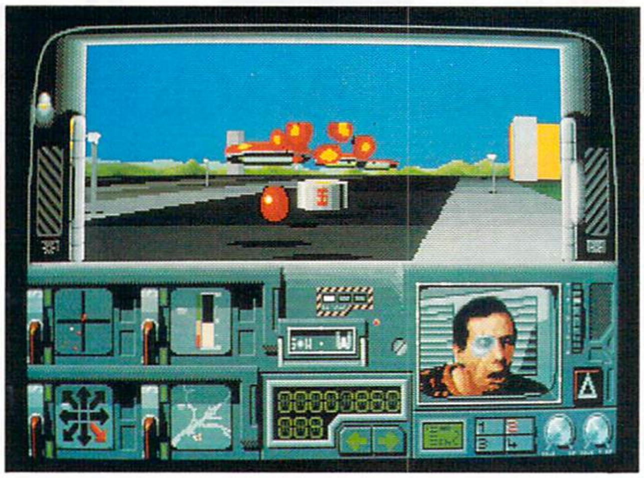
By John Ryan

The year is 2050, and a flourishing drug market grips Metacity. The pushers of these deadly, mind-altering drugs are actually mutant gangsters known as Alterants. Their leader, Lord Darkenill, has divided Metacity into four quadrants, each ruled by his powerful minions. Because you volunteered to clean up the Alterants, you're going to have the very best equipment at your disposal—the Hoverkill 1000, a lethal urban assault hovercraft.

Hoverforce (Accolade, $49.95) is a smooth mixture of action and strategy. You must rid the city, quadrant by quadrant, of Alterants, and the Hoverkill 1000 is just the vehicle for the job. Flying at dizzying speeds above the streets of Metacity, your assault vehicle sports an impressive array of features: machine guns, pulse cannons, laser-guided missiles, radar, complete city maps, and more.

Once you've logged into the game you'll get a detailed briefing from Sheriff Stone on the task awaiting you. Each color-coded quadrant is controlled by an Alterant overlord. You always start in the blue quadrant, where you must defeat its Alterant three times before moving up to the next quadrant.

Your task is to interdict drug runs. Drug runners, following predetermined paths, stop at various buildings throughout the city to make their transactions. The guys don't travel alone. Each runner has an entourage of bodyguards, such as Mech Spiders, Zombie Drug Slaves, and Flying Saucers, all of which are intent on foiling your interdiction efforts.



You're in charge of Alterant endings.

Hoverforce sports some of the fastest graphics I've seen in a long while. After you've strapped yourself into the cockpit, the world is presented from the first-person perspective. The top half of the screen is the view of the city. The solid, three dimensional graphics depict walls, buildings, streets, ponds, lakes, and a host of other landmarks. The Alterants and bodyguards are not, however, simply waiting around for you to act; they're moving about the city, taking care of business. Assuredly, you won't have much time to go on a sight-seeing tour.

The bottom of the screen presents the controls and indicators for the Hoverkill 1000. A radar screen depicts the location of enemy vessels in the area. There are also a map display of the city, indicators for weapons selection, a compass, movement direction, shields and resources. Almost as important, a small window on the panel depicts a digitized portrait of your current Alterant opponent, who displays pleasure or disappointment, depending on whether you're attacking him or he's attacking you.

As your move about the city, you must collect evidence to put the drug lords out of business. Each level ►

Crib Notes

By Peter Olafson

SOME FOLKS ARE having a dickens of a time getting out of Arboria in *Bard's Tale III: The Thief of Fate* (Electronic Arts, $49.95). If you have a certain grisly momento from your confrontation with Tslotha Garnath—even after you've returned to the king and surrendered Garnath's nasty head—then you've come to the heart of the matter. Its use should be clear once you've inspected Valarian's Tomb.

• *Bard's Tale* and *BT II: The Destiny Knight* (Electronic Arts, $19.95 and $59.95, respectively) are also generating their share of mail. The "Name the one of cold, foretold twofold" riddle on the first level of Kylearan's Tower in BT (though answered some months back) continues to get people turned around. (Good grief, doesn't anyone map anymore?) The answer is "stone golem." This will trigger a teleport, and you'll be on your merry way.

This is one we've dealt with before, too, but you keep asking. There are two words necessary to split the rock in Colosse and enter The Destiny Stone in BT II. If you'd rather do it yourself, go look in The Tombs. (The strange mage is telling the truth.) If not, well, your mother, bless her soul, taught you to say one of the words. No, not "thank you." (That's two words.) And the other word will give you a chill. I hope this frees me from your pleas.

• A few people are stuck at the mill in *Journey* (Infocom, $49.95), and no wonder, as the puzzle with the pits and that odd machine is about the toughest in the game. One has a pickaxe (you have to ►

To locate developers of the games reviewed, see the "Manufacturers'/Distributors' Addresses" list on p. 60.

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of the quadrant requires you to gather a different amount of evidence. As you glide about and engage the enemy, you'll discover red canisters of drug evidence and yellow canisters that extend your own life. You'll also find shops in town where you can upgrade your assault craft's weapons, armor, and other systems (you'll need upgrades when the final showdown with Lord Darkenill nears).

If you're a fan of lightning-fast graphics, great sound effects, and music, then Hoverforce may be the game for you. The disk is not copy-protected, so it can be backed up. With its mix of fast action, strategy, and pure shoot-'em-up characteristics, Hoverforce is a sure-fire way to get your joystick arm in shape.

STELLAR 7

By Peter Olafson

Nicely converted from the IBM, Stellar 7 (Dynamix, $34.95) finds you piloting a Raven fighting vehicle across seven three-dimensional planets on a mission to protect Earth from Gir Draxon's Arcturan Empire.

Draxon is a big bloke with a spiked helmet and bad complexion, and he shows his teeth a lot. The Raven is essentially a tank, but what a tank! Aside from its cannon (standard equipment), it can dump mines, hide from enemy radar and detect enemy craft hiding from yours, hop into the air and use an enemy vehicle's shield to destroy it.



Free seven planets from the Arcturan Empire's grip.

At its heart, Stellar 7 is a gorgeous, bells-and-whistles version of Battlezone, and there's nothing like it around. (You may recognize Stellar 7 as a descendant of Arctic Fox, which Dynamix did for Electronic Arts in 1986.) Combat is carried out in three dimensions in a series of distinctive landscapes dotted with obstacles (cover) and the occasional refueling station. The enemies have blood in their eyes and 11 weapons on land and in the air, some of which are a mystery at the outset.

Between planets, if you succeed, you're treated to a static graphic screen and a splendidly digitized spoken exchange between old Gir (who talks like an LP played at 16 rpm) and his chief lieutenant (who speaks in a vaguely Eastern European accent). Morever, the graphics, which appear to use 32 colors, preserve much of the flavor of the IBM original. In other words, it's a good port.

Stellar 7 makes no bones about being an arcade game. The power modules you can collect after destruction of a trio of enemy vehicles are basically power-ups. And at the end of each level, a spacecraft turns up and deposits a Planet Guardian. He's coming for you, and you can bet he is not bringing Fig Newtons and milk.

Speed is the main bugaboo; apparently these seven planets have a lot of mud on them. You can crank the game up a bit by lowering the level of graphic detail, but Stellar 7 still seems rather slow on 68000-based machines. (That's rather odd, as one of the power modules provides much enhanced speed.) It's smoother on the 3000.

I suppose I'm disappointed that Dynamix didn't take the game a step further. Arctic Fox was cruder-looking, to be sure, but there was terrain to negotiate, weather to ride out, a single huge environment and a nonlinear solution—more staying power.

I couldn't run Stellar 7 from hard disk on my three-megabyte A500—too many partitions—but it apparently runs fine once you free up chip RAM. The three disks can be backed up, and disk access isn't excessive, especially if you configure the game to skip the transition scenes.

So this is a good one. Let's see if they take it another step.

cast your way in, and then can't get out). Another has essences (but no way to get at them). The third has the exit.

For starters, save the game and cast "Wind" in one of the pits; it'll give you a better idea of which rune is connected with which pit. (For now, don't worry about the one you can't read.) Now restore the saved game to get back the air essence spent on wind. Otherwise, there's no need to go down there.

The machine is a teleporter, and the dials set origin and destination. Transport the pickaxe into the essence pit, and you'll be able to dig for essences. Save the game again, get back to the machine and indulge in a little channel-hopping. See, the dials have six settings, so you know the exit has to be one of the four runes you haven't used. It's a process of elimination, and you'll hit it eventually.

• Catching the unicorn in *King's Quest IV: The Perils of Rosella* (Sierra On-Line, $59.95) is another pointed problem. The silly horsie keeps running away. (Hey, is it my breath?) And goodness, the solution's a bit involved, too.

It starts with the diamonds. (You found them in the dwarves' house after cleaning up, remember?) The dwarf in the mine off to the south says you can keep them, and where do you suppose they could be put to best use? Right, that miserable fisherman and his wife. He'll turn over his pole in exchange, and I hope you beat the early bird and caught the worm, for you'll need bait. Use it at the pier, and you never know what might turn up.

Hey, you know how hard it is to get to the beach on a work day, so take a swim. (Save the game first, in case you run into a shark.) If you go west far enough, you'll find Genesta's Island. There's a lot to see here, but only one thing you really need to get. (It's a ticklish matter.)

Head on back and. . .thar she blows! A whale. (Or perhaps it's the shark again, so save the game.) Suddenly, Rosella is making like Pinocchio. Take a look around the whale's mouth first. There are a couple of items of interest—one being the bottle and

Continued on p. 75.

BARD'S TALE III: THE THIEF OF FATE

By Peter Olafson

The Amiga conversion of Bard's Tale III: The Thief of Fate (Electronic Arts, $49.95) is a major disappointment. Gone are the meticulously drawn building facades that graced the first two games of this classic role-playing series from Electronic Arts. In their place are hovels that would look acceptable on a Commodore 64, but are absolutely appalling on the Amiga. (The graphics get worse in the dungeons.) Gone are the wonderful digitized Gregorian chants that graced each healing session.

For goodness sake, what happened?

Well, the excellent Bard's Tale and BT II: The Destiny Knight both were designed *and* converted to Amiga by Interplay Productions, then a development house. They've since struck out on their own as a publisher. The Thief of Fate, however, while still designed by Interplay, was converted by EA (which owns the Bard's Tale name). The result is more or less a straight IBM port with only the most basic of Amiga amenities.

The game opens in a refugee camp outside the ruins of Skara Brae, the city freed from the wizard Mangar in the original game. Yes, ruins: Tarjan the Mad God (a peripheral character in the series opener), has blown a fuse and trashed the place, and turnabout is fair play.

It's a long chase. The game's huge, the biggest BT yet, on two disks, with 80 dungeon levels of all different sizes (rather than the standard 22 × 22). There is automapping. There are two new classes of spellcasters—chronomancers and geomancers—and a whole slew of new spells.

It runs on all Amigas (including the 3000), and, most notably, it'll run from hard disk on one-megabyte machines—a decided improvement over its predecessors. (There's also no on-disk copy protection; the game uses a codewheel.) I'd be more impressed with the new features if this game echoed any of the virtues of its parents. (It's also the slowest of the series.)

To be fair, not all the blame can be placed with EA. For also gone from the game is insular feel of an intact fantasy world. Interplay went overboard and added time travel, with segments in Troy, Rome, Nottingham, Berlin, Stalingrad and Hiroshima.

It's all a bit much, and Thief of Fate never quite seems to settle down. Moreover, the game is nearly three years old, and it's pretty much the same old hack and slash, with lizards and snakes still carrying gold and armor, and every bloke on the street trying to throw himself on your swords.

It's time to move on.

MEDIEVAL WARRIORS

By Rob Lawrence

Leading a swarthy band of King Arthurs, Robin Hoods, and Conans into an all-out bloodsport, you must stab, hack, or chop the life out of every enemy soldier you see in Medieval Warriors (Merit Software, $49.95), but to do it more efficiently than your opponent.

The battlefield is a ►

22 × 15 grid, with landmarks and obstacles placed according to the scenario you choose (inside a castle, across a river, between two forts, or through a village wall). Separate movement or attack commands are issued to each of 12 warriors during each player's turn. The strategy required is much like that used in chess. You must take into consideration the special abilities each warrior possesses with his own weapons, and the distance he can move.

When I'm out to slice and dice knights, I like to have a nice tool set with which to do it. The game doth fall short here. You can use knives, axes, arrows, or a sword, but no pikestaffs, maces, flamethrowers, grenades, or the like. Although your warriors are all named differently, they dress and look the same (team uniforms, perhaps?). Also, movement in battle is very slow. I grew several gray hairs waiting for the computer to position its troops.

As for the manual, it's actually too thorough. It covers every point and option in the game at least once, sometimes two or three times. I, however, had no problem in successfully commanding my army before ever reading a page (except to answer the copy-protection question). A full megabyte is also required to play, although I fail to see why.

Despite the drawbacks, there are some conveniences: It installs on a hard drive, plays on a 68030 machine, and you can play through modems and run it from Workbench. It even sports fairly good graphics and decent sound effects. In my opinion, however, Medieval Warriors would have been much better off as a combat sequence for a large-scale interactive adventure. It simply doesn't have enough variety or complexity to hold its own.



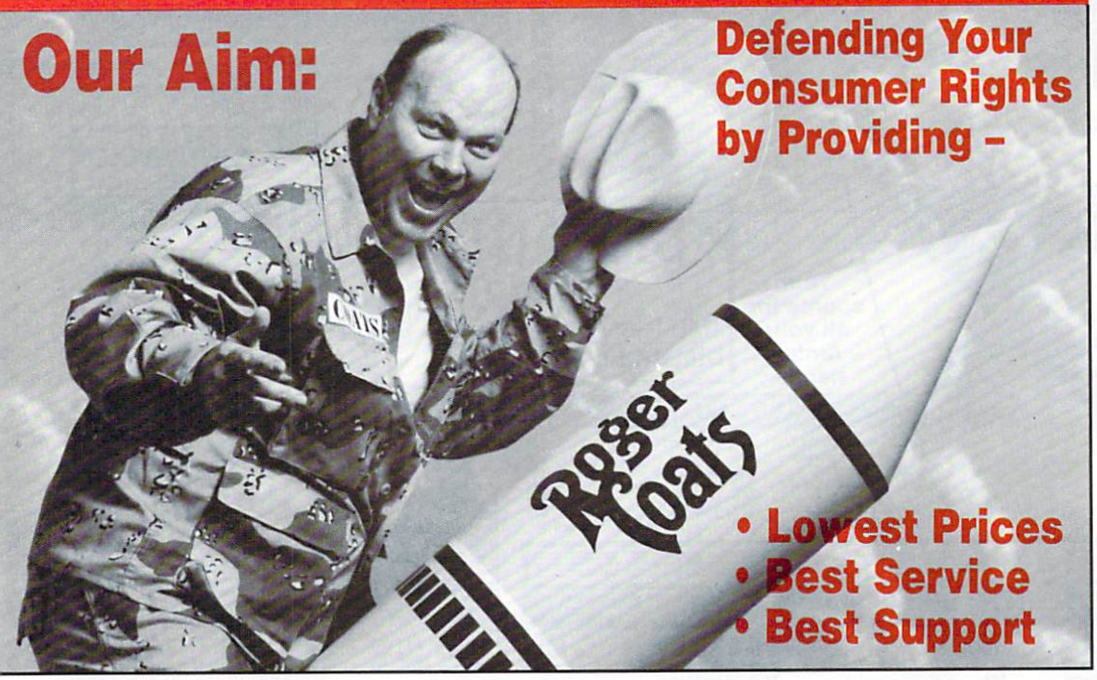
Efficient hacking and slashing is the key.

THEME PARK MYSTERY

By Dodson Yaple

The best thing about this otherwise unexceptional IBM port is its setting, an abandoned theme park that's in need of some serious ghostbusting. Seems you've inherited the joint from your uncle, who went ►

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mad and committed suicide. Now it's your turn.

The first stop on your tour in Theme Park Mystery (Konami, $49.95) is Yesterdayland, where you amass the resources needed to check out the rest of the place. No lurking fiends here, just a few antiquated amusement-park machines and a boarding platform for the park's monorail. You're broke, of course, but some sucker left a few precious tokens in one of the coin-return slots, and that's all you need to run up a quick bankroll. Be sure to spend some of it on Zoltan, the mechanical fortuneteller; he dispenses tickets, hints, and other items you can't live without.

Now that you're armed and dangerous, it's time to hop on the dreaded Monorail of Fear. You have to visit three other themeworld arcade sequences to capture the eight gremlins that are haunting the park. In Dragonland, you run around a dungeon (grabbing things while avoiding enemies). In Dreamland, you run around a surreal chessboard (grabbing things while avoiding enemies). In Futureland, you zoom around on a rollercoaster (grabbing things while avoiding enemies).

It's all-too-familiar stuff, though there are a few interesting aspects, such as some old adversaries from Donkey Kong putting in an appearance. The biggest problem is the interface, a needlessly-confused jumble that requires constant midaction shifting between joystick, mouse, and keyboard.

Theme Park Mystery might have been a good game on the Amiga, but Konami opted for a quickbuck conversion that disregards the Amiga's substantial advantages. As a result, the game exemplifies just about every weakness you might expect from a port: ordinary graphics, slow joystick response, coarse animation, crummy sound effects, and no music.

Even as you enjoy the game's several imaginative touches, you're exasperated by the way it systematically shortchanges you. Unusually aggressive copy-protection—both disk- and keyword-based, and difficult to use—is the final straw. Unless you already own all the top Amiga originals, look elsewhere.

From p. 70.

the other the uvula. If you did the right thing at Genesta's, you're all set—you just have to find the right place to use it. When you do, the whale will, well, spit you up and you'll notice a subtle change in setting. You're still at sea, but there's an unfamiliar island off to the north.

This is not one of the game's better puzzles. You'd never know it, but the bridle's here—one of the two items you need to nail the unicorn—and it's rather difficult to find. Check out the ruined rowboat, and be persistent.

By the way, your catch from the pier is getting a bit ripe, isn't it? Maybe the pelican is less discriminating, and he'd do a swap. (If you've scared him off, exit the screen and then return.)

Getting the other item to nab the unicorn is much simpler. Indeed, you may already have it by now. East and south of the spot where you started the game, you'll find an Olympic swimming pool. Hang around, and sooner or later Cupid will show up to take a bath. Approach him for his autograph, and he'll panic and leave his bow and arrows behind. Your having them will make the horse friendly enough to approach.

If you're stuck in a game, or simply want to spend 29 cents frivolously, I can be reached by US mail at 12 W. 104th St., Apt. 3E, New York, N.Y. 10025, and via electronic mail as P.OLAFSON on GEnie and Peteroo on American People/Link. Send a SASE if you can't wait for an answer in print. ■

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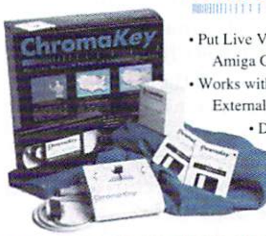
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From p. 16.
instead of the one typically used for computers. While this makes the Amiga a leader in desktop video, what's good for video can really be hard on the eyes.

Because interlacing doubles the display's vertical resolution, it causes the image to vibrate, or flicker. Typically, you don't notice this flicker on your TV, because, unlike computer images, television pictures do not use a lot of thin lines and sharply contrasting colors. When you display this kind of image in the Amiga's hi-res interlaced modes, however, the result is that all-too-familiar flicker.

Although home remedies like wearing cheap sunglasses or turning down the contrast on the monitor can help, the only real solution to flicker is a device that converts interlaced into noninterlaced signals in conjunction with a high-resolution monitor. The only such device previously available was the MicroWay flickerFixer, an A2000-series-compatible plug-in board. Now, two more boards are ready to give MicroWay a run for its money: the A2320 Display Enhancer ($299) from ***Commodore*** for the A2000, and Flicker Free Video ($499.95) from ***ICD*** for any Amiga.

THE A2320

The Commodore A2320 is essentially a stand-alone version of the display enhancer used in the A3000. Installation is relatively simple: You pop the case off your A2000, plug the board into the video slot, and put the case back on. The manual includes complete, step-by-step instructions, including excellent diagrams.

Once installed, the card adds a 15-pin monitor jack to the back of your computer, along with a toggle switch that you can use to bypass the enhanced display. The manual states that the card must be hooked up to a multiscan monitor and not a VGA-only monitor, but either works well with the enhanced display enabled.

The VGA-only display, however, won't work properly when the bypass switch is turned on. Unless you need this bypass switch for some rather obscure superhi-res-mode operations (available under Workbench 2.0 with an ECS Denise chip), you probably will be content with a VGA-only monitor. (If you do decide to buy a multiscan monitor, make sure that its horizontal scan frequency covers the 15.75–31.5 KHz range. Many of the newer VGA multiscan monitors cover only the 30–50 KHz range, which makes them no better for use with an A2320 than a VGA-only monitor that scans at a fixed horizontal rate of 31 KHz.)

Once you install the board and attach the monitor, you need only adjust the fine-tuning control, using the tool provided. If you are using Workbench 2.0, you must boot from the A2320 test disk. You will immediately notice a difference in the display. For one thing, the black lines between the horizontal scan lines disappear. Even in noninterlaced mode, the pixels seem more square and distinct. In interlaced mode, the biggest change, of course, is no flicker.

Another big difference is the screen's black border. This is not only normal, but actually desirable, because the display quality of VGA-style monitors lessens considerably at the edges. IBM and Apple users are already used to the border, but it drives many Amiga owners to distraction. They find it especially irksome because it reveals some Denise chip quirks. With the standard A2000 Denise chip in use, the border's right edge wavers slightly from line to line, creating a "zippered" effect. There is also a single wavering scan line at the top of the screen. Installing an ECS Denise chip eliminates the wavering line on the right, but not the one at the top.

To get rid of the border (and both wavering lines), you must stretch the display to where it normally doesn't (and shouldn't) go. While most monitors provide a vertical-size adjustment for this purpose, very few provide horizontal-size adjustments that stretch the screen enough to get rid of side borders. If you really despise black borders, buy a Commodore 1950 monitor or one with a horizontal-size switch.

The ragged-right display edge is visible because the A2320 displays in overscan only as far as the standard Denise chip allows. The bordered A2320 display makes it easier to take advantage of an overscan display by using either the public-domain program MoreRows or the built-in overscan support in WB 2.0. Keep in mind, however, that the larger the display area, the slower the CPU times become with a stock A2000.

Another way to get a larger screen with the A2320 is to use the PAL format available with Workbench 2.0, although PAL's slower refresh rate generates some flicker of its own.

Aside from some ragged edges, the A2320 generally works quite well. One test unit, however, exhibited a problem that affects many A2320 boards in current use. It displayed almost no difference in contrast between gray levels of 7 and 8. To test for this problem, run a paint pro-

Display Enhancers' Features

	A2320	FFV	flicker-Fixer
Scan-doubles non-interlaced modes?	Yes	No	No
PAL compatible?	Yes	Yes	No
ECS Productivity-mode compatible?	Yes	Yes	No
Clean edges?	No	Yes	Yes
Uses Video slot?	Yes	No	Yes (1)
Uses Denise socket?	No	Yes	Yes (1)
Bypass switch?	Yes	No	No
Genlock interference?	Some	No	No (2)

Notes

(1) Standard flickerFixer uses video slot. Optional Denise Extender Board (around $99) can be used instead to connect to Denise socket.

(2) Genlock compatibility requires either DEB or an optional compatibility board.

gram and set one color to all 7s and another to all 8s. Then draw a box with one color on a background of the other. If you can barely see the box, your A2320 has the wrong values for resistor packs rp301–rp303. Replace them with 33-ohm series resistors. *(Editors note: This problem is covered under Commodore's one-year warranty.)*

Flicker Free Video

ICD's deinterlacer board takes a somewhat different tack from either the A2320 or flickerFixer. Flicker Free Video (FFV) plugs directly into the Denise socket. While this makes installation somewhat more difficult, it also makes FFV the more flexible board. It is the only deinterlacer board compatible with stock A500s or A1000s. In addition, because it does not use the video slot, you can use it with an internal genlock or Video Toaster (NewTek) right out of the box. You need to buy a Denise Extender Board (DEB) to use the flicker-Fixer with an internal genlock or the Toaster, and you have no options at all with the A2320.

Although FFV coexists with video-slot boards, check compatibility with other motherboard-resident products you own. For example, the current MegaChip A2000 board overlaps the space where you plug in the FFV board. Nor can you install FFV in an A500 with CSA's MegaMidget Racer. In general, if you have any board that plugs into the 68000 socket or anywhere else on the motherboard, first check to see if both will fit.

Installing FFV in an A2000 requires you to remove the cover and the power supply cage to reach the Denise chip. Then remove the chip from its socket, plug it into the FFV board, and plug the board into the chip socket on the motherboard. A500 installation is a bit simpler; you only have to remove the cover and shielding.

The A1000 installation, however, is the most complex of all, as it requires clipping wires and soldering connections. If you don't feel up to performing this surgery, you can have ICD do it for you for $40 plus shipping. Once it is installed, you plug in a ribbon cable that attaches to the 9-pin monitor jack. On the A2000, this jack mounts on a bracket. For A500s and A1000s, however, you must either let the cable dangle out of the back of the box or hack the case to create a suitable mounting receptacle.

FFV's installation instructions are fairly thorough, but they need more diagrams of inside and outside views and a better look at the Denise chip's orientation. Once installed, the FFV board needs no adjustment. Although the display has the same black border around it as that of the A2320, there are no ragged edges. You can set FFV's jumpers to indicate whether you are using a standard or ECS Denise, allowing it to display clean edges on all sides, regardless of which Denise chip you use.

Like the A2320, FFV automatically adjusts when you switch to PAL mode. Unlike the A2320, however, FFV's circuitry does not prevent motion blurring in noninterlaced display mode. Because FFV does not have a bypass switch, it can output video only at VGA scan rates. If you need to switch to Amiga scan rates (to see a superhi-res screen properly, for example), you must install a switchbox to toggle your multiscan monitor between the FFV 9-pin jack and the Amiga 23-pin jack.

The original review sample worked ►

properly for only a few minutes at a time before the picture began to waver and finally break up completely. ICD technical support said that a faulty component from one of its suppliers caused the problem, and they arranged for an exchange. The new board worked flawlessly.

HEAD TO HEAD

Because these boards are designed to convert video-compatible display into computer display, you cannot use them directly with video. These cards will interest only video users who want to clear up 3-D modeling displays or perform nonvideo tasks with the same machine. In these cases, genlock compatibility is a serious concern. While FFV can live with internal and external genlocks, the A2320 will not work with internal genlocks, and may not get along well with some external ones.

According to the manual, the A2320 display is undisturbed by SuperGen genlocks, but this applies only to those manufactured within the last year (serial numbers starting with a 3). Digital Creations will modify older SuperGens for a fee of about $45. The lesson is to make sure your genlock works with the A2320 before you buy it. While older models of the flickerFixer require a genlock-compatibility option to function correctly when connected to genlocks, this feature will soon become standard equipment. The Denise Extender Board that frees up the video slot also provides genlock compatibility.

Which display enhancer is the right one for you? The major variables are price, method of installation, and features. The A2320 is the least expensive board, but unless you use it with a monitor such as the Commodore 1950, be prepared to put up with a wavering border at the right and top edges (and watch for the gray-level defect). Video users will probably want to pick one of the other boards.

MicroWay's flickerFixer is a bit more expensive than the A2320, but is the only board that either installs in the video slot or plugs into the Denise socket. The only real drawback to the flickerFixer is that it will not properly display PAL or ECS productivity-mode screens.

While Flicker Free Video is the most expensive board, it is the only one that is easy to install in A500 and A1000 models. If you need to keep the A2000 video slot free, you'll find that the Flicker Free Video board is less expensive than the flickerFixer/DEB combination, and it provides full support for PAL and ECS productivity modes. Unlike the others, it needs no fine adjustment, though its display seems a bit less crisp.

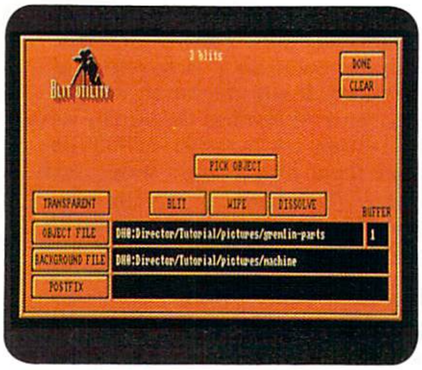
THE DIRECTOR

Follow the script!

By Steve Pietrowicz

THE LONG-AWAITED Director upgrade has finally arrived, and it looks as though the ***Right Answers Group*** has done it again. The new and improved version of this amazing piece of software, The Director version 2 ($129.95; $70 upgrade) is not only chock-full of new features, but is also easier to use.

For those unacquainted with The Director, it is a scripting language that you can use to create presentations and stand-alone applications. It even controls animations. While the language itself is similar to BASIC, it is much more powerful. It provides built-in commands so that you don't have to write code for the program to load pictures or sounds. In addition, The Director compiles scripts into "films" that you can view with its Projector utility. The projector program is freely distributable, so you can share your creations with anyone.



The Director's new Blit utility.

EDITORS FOR ALL

The original version of The Director came without an editor, so you had to make do with your own. When writing scripts, I found myself constantly flipping back and forth between my text editor and the script compiler. It was a bit awkward, even with a separate CLI window. Version 2's new script editor, Dedit, changes all that. Now you can call up and run utilities and scripts from within the editor by using pull-down menus. When finished, you automatically return to Dedit. It's a snap to use and eminently convenient.

To illustrate Dedit's convenience, let's say that you want to find a series of pictures on your disk and build a short viewing script. In previous versions of The Director, you had to keep track of where your pictures were located before accessing an editor. With Dedit, all you have to do is select "View IFF" and then choose available pictures with a file requester.

After selecting and displaying a picture, you return to Dedit, where the program displays—at the bottom of the screen—the picture size and the number of colors. In addition, The Director now puts the name of the picture last viewed into the paste buffer. From there, all you have to do ►

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AW Shucks!

Corrections of errors in *AmigaWorld*.

Item: In our July roundup of A2000 hard-disk interfaces, "Between a Slot and a Hard Place," two of the descriptions of the tables in the "Decisive Data" sidebar (p. 32) were inadvertently swapped. The explanation for Table 2 actually describes Table 3, and vice versa. Our apologies for any confusion this may have caused.

Item: In July's Manufacturers'/Distributors' Addresses List, the telephone number given for the The Vivid Group (p. 100) is actually their FAX number. Their correct phone number is 416/340-9290.

Item: Also in the July issue, the price listed in the review of Terrain (p. 18) is incorrect. It actually is $49.95.

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is paste the buffer into the script where you want it, and you're on your way.

You can also access Dedit's simple editing features, such as cut and paste, search for text, and undo last command, through pull-down menus. If you are more advanced and prefer to use the keyboard instead of the mouse, you can access most of these functions with a subset of commands based on the Unix editor "vi."

TO GOOD AVAIL

The Director version 2 includes three other utilities: Blit, Button, and Polygon, all of which you can access through menus in Dedit. All three utilities take some of the "dirty work" out of writing scripts.

Version 2's Blit utility is an improvement over its predecessor's. It allows you to clip parts of one picture and place them into another. How the clips appear depends on what method you choose. You can make them appear suddenly, wipe onto the screen, or show up pixel by pixel in a way that's similar to the transporter special effects on Star Trek. After using the Blit Utility, all the commands you specified are put into Dedit's paste buffer so you can insert them into your script.

As the name implies, the Button utility lets you specify commands that create areas on screen that will perform certain tasks when activated. This is similar to the concept of "gadgets" in AmigaDOS. You can create buttons of any shape, size, or color, and then return to Dedit to assign them tasks.

The polygon-creation utility is quite powerful. With it, you can scale objects and then rotate and move them, edit points, and change centers of origin. You can even automatically change one polygon into another by using an animation method called "morphing."

Perhaps the most useful function of this utility is that it allows you to employ a polygon as a motion path for other objects. If you want to make an object zig-zag across the screen, all you need to do is generate that pattern within the Polygon utility and save it. When you include it in your program and add a few extra commands, you can make an object follow each point on that polygon. It's a very effective way to move objects on the screen.

CONAN THE LIBRARIAN

Enhancing its editing functions, Dedit lets you select libraries, or subroutines, that you can use to add new features to your scripts. These libraries include date-and-time and sine and cosine functions, special wipes, and functions to combine IFF pictures with ANIM files. You can even create your own libraries with help from the manual's guidelines.

The Director's already powerful scripting language has been expanded and improved. Now there are commands to control IFF sound more effectively, to play and manipulate SMUS files, and to control and play ANIM files. Those are just some of the many features included in the upgrade. ARexx programmers can also take advantage of The Director's ARexx commands to hook up with other ARexx programs. The package comes with numerous examples on disk to get you started.

Even the seven-section manual is substantially better than in the last release. It includes many examples and a special introductory tutorial.

I just can't say enough about The Director version 2. I am completely overwhelmed at the amount of new material in this upgrade, and I'm delighted at how much the Right Answers Group has improved its product. If you're thinking of doing any sort of presentation, you should seriously consider The Director version 2.

CDx-650

Compact disc technology

for the masses.

By Lou Wallace

THERE CAN NO longer be any doubt, CD-ROM technology is here to stay—and with good reason. With their vast storage potential (over 600MB), compact ROM discs are the perfect medium for distributing large amounts of information. When compared to floppy or even hard-disk storage, CD-ROM is actually the most cost-effective storage medium available.

With the advent of CDx-650 drives from ***Xetec***, Amiga owners need wait no longer for this technology. You can choose between the internal (CDx-650I, $599) and the external (CDx-650E, $699) versions. Because these units adhere to the industry-standard ISO-9660 format, they promise data compatibility with discs on other platforms, as well.

KNEE BONE CONNECTED TO THE. . .

The CDx-650 drive connects to your Amiga via a SCSI interface. The easy-to-use installation software configures the drive for a variety of controllers, including those from Supra, GVP, IVS, ICD, CBM (including the A3000), Microbotics, Pre'spect, and, of course, Xetec. The installation software automatically adds a mountlist entry for you, which simplifies a somewhat technical installation procedure. For purposes of this review, I used the external CD-ROM on an A3000 with both the 1.3 and 2.0 operating systems and got good performance results in each case.

When you buy a CDx-650, Xetec throws in with each drive a free CD disc called Fish & More, a collection of public-domain software that includes the first 370 Fred Fish discs and a collection of other programs, graphics, animations, and utilities. Once you connect the drive, you can immediately begin accessing the huge volume (over 500MB) of information on the supplied disc. You can load many of these items directly from the Workbench by clicking on their icons, while others require CLI access.

While CD-ROM drives offer the benefit of large capacity, they have two drawbacks. One is the fact that they are read only, which means you cannot store or write information to the drive. Secondly, although they are much faster than floppy drives, they are slower than conventional Amiga hard-disk drives, so loading data from them takes longer. Typically, data transfer from the CD-ROM to the computer occurs at a rate of 170K per second.

A positive aspect of the CD-ROM technology is price. Although you might expect that a disc with the same capacity as 650 floppies would be costly, they are relatively inexpensive to produce. Consequently, in many cases, CD packages are no more expensive than the software would be on disk. For example, Xetec

Continued on p. 86.

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From p. 82.
sells another CD-ROM disc (Fish & More, Volume II), containing Fred Fish disks #371 through #470, for $49.95. This price is much less than it would cost in floppy-disk form.

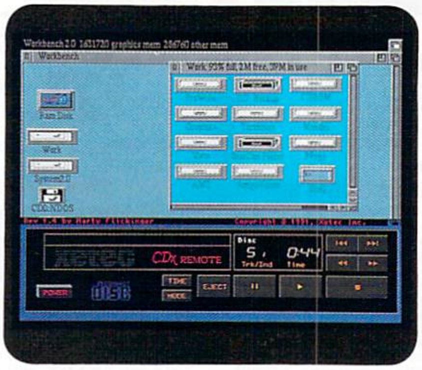
Bonus Points

If you were limited to using Xetec's CD-ROM drive exclusively for running the Fish collection, you might not get too excited unless you are a users-group librarian, a BBS operator, or an avid PD software collector. What generates a little excitement is that the CDx-650 runs some CDTV titles right out of the box!

Obviously, I wasn't able to test all the CDTV discs available, but many I did try worked (although some would run only under the WB 1.3). These included The Case of the Cautious Condor (Tiger Media), World Vista (Applied Optical Media), American Heritage Dictionary (Xiphias), The Time Table of Science & Invention (Xiphias), and even Commodore's official CDTV Welcome Disc. Xetec claims that several other titles will run, including Time Table of Business, Politics and Media and The Electronic Cookbook (both from Xiphias), and Merit Software's All Dogs Go To Heaven and Classic Board Games.

CDTV compatibility means this drive has several interesting things going for it. For one, if you already have an Amiga equipped with a SCSI controller, it's a bit cheaper than a stand-alone CDTV. Second, you can use the mouse and keyboard instead of the CDTV controller, which makes running the programs much easier. In many instances where your Amiga is using a 68020 or 68030 accelerator, the software runs faster and better than on a stock CDTV, which uses the A500's 68000 processor.

You can use Xetec's CD-ROM drive to play standard audio CDs, but you must connect it to a stereo (using the rear audio connector) or a pair of headphones (front audio connector). In order to play audio CDs, you need to run the supplied utility program called CD Remote, which looks and acts like a standard CD audio panel. When playing music, the CD-ROM works in the background while the Amiga (and you) can do other useful things. Unlike CDTV, however, the Xetec drive does not support CD+G, so you cannot access the graphics found on some audio CDs.



CDx-650's control panel and a view of the disk icon on a Workbench screen.

After using the Xetec drive for several weeks, I found it to be a useful addition to my Amiga hardware repertoire. The Fish & More collection alone is worth the price of the drive. Being able to take advantage of at least some CDTV applications is a bonus, and it means there will be a steady stream of software compatible with the drive. All in all, I was very impressed, and I recommend it to those wanting a CD-ROM for their Amiga system.

Pro Video Post

You can't tie your horse to it, but it gets the job done.

By Gene Brawn

BEHIND THE FANCY effects, quick cutting, and talking heads that make up modern television, an unassuming workhorse quietly ties it all together. The electronic character generator, or CG, is the keystone of television production. From the early days of the Vidifont to today's Chyron, these little keyboards were nothing more than a sophisticated (and expensive) personal computer. It was only a matter of time before something off the shelf (and cheaper) could do the job. That cheaper something was the Amiga, and the first software to do the job was Pro Video CGI.

This seminal software put the low-end video jockey in the driver's seat. Anyone with CG experience could uncrate his new Amiga, fire up Pro Video, and in no time create text screens rivaling those of their Chyron-blessed competitors. The honeymoon was short-lived, however, because users soon wanted new-fangled Digital Video Effects (DVEs). ***Shereff Systems***, developer of Pro Video CGI, took the hint, so now here we are again, a few years and a couple of upgrades later. Pro Video Post (PVP), with a list price of $349.95, does DVEs.

While Pro Video Post multitasks, the software I tested (v6.01.90) requires 880K of chip RAM, which effectively takes over the machine. According to Shereff Systems, PVP requires a minimum of 1MB of chip RAM and 2MB of fast RAM. If you have a hard drive, you will want to install the program there, but heaven help the novice who tries. Although the manual provides adequate directions, you must add some ASSIGN statements to your startup sequence to tell the program where things are. This is too involved for the typical video-production person; Shereff should have included a point-and-click install program to handle this chore.

Family Resemblance

In operation, Pro Video Post is essentially unchanged from previous versions. PVP still saves project details such as page formatting, transitions, and timing as "jobs," and ties sequencing to "banks" of 100 pages each. Edit and Page modes remain too, with formatting and transition changes made in the former, and sequencing initiated in the latter. Similar to its elder brethren, Pro Video Post sports a keyboard-only interface (although a mouse click controls page sequencing). Screen resolution is Amiga-standard hi-res/overscan (720×480) for pictures and custom backgrounds, with a "safe area" of 640×400 for text.

Proprietary fonts follow suit from earlier versions (i.e., Pro Video Post does not support standard Amiga-bit-mapped typefaces). The package includes 16 fonts in four generic styles: a plain Sans Serif, a traditional Roman, a blocky Modern, and an angular Clean. Although the assortment of fonts is varied, I would prefer at least twice as many styles. In fact, I would like to see a tool to convert Amiga fonts to PVP fonts.

You can combine any size, style, or color of type, with solid or drop shadows, and outlined in any palette color.

You can underline and italicize, but not make bold, entire lines of text. You can also tighten up the letter spacing on a line with the kerning feature. In addition, PVP provides two- or four-color multicolored text, and you can fill it in with any of 14 supplied patterns.

Some Bells, One Or Two Whistles

I really liked Pro Video Post's new digital effects, although the 82 combinations of wipes, flips, peels, spins, and zooms do not bring anything new to the genre. There are no "live" DVEs; PVP must render each effect before displaying it, effectively relegating DVEs to the post-production process (hence the program's title).

Although you cannot save effects to disk, rendering times are blissfully short if you use an accelerated machine. (I used a Mega-Midget Racer from CSA, and I strongly recommend an accelerator if time is important to you.) Most transitions execute smoothly, but a few line effects did "jiggle" the top of the page. Creating DVEs with this software is a real experience. Every action in the creation process occasions either a tone or voice signal. This is great for casual users, but could annoy anyone who would rather not wait for the voice to finish its spiel before continuing. If I could only understand what it was saying...

You will need a good genlock to convert PVP's RGB output to NTSC or PAL video formats. This version supports both Digital Creation's SuperGen and the Magni genlocks with built-in keyboard commands. Unfortunately, you can only invoke genlock functions manually. A GPI (General Purpose Interface) trigger, however, permits your studio's edit controller to regulate PVP's page sequencing.

Initially, I had hoped to use PVP's timed page-sequencing feature to augment my Video Toaster's CG software, but this proved impossible. The Toaster's Genlock mode worked fine until I tried one of PVP's line-based video effects. My video then lost sync until I reset it.

Backgrounds and Pictures

You can use your own hi-res IFF ILBM pictures as backgrounds, provided that they are four bitplanes or fewer and no larger than 768×484 pixels. Otherwise, the package provides alternative background options such as the Quick Background with checkerboard, line and oblique patterns, and a line background mode for more localized effects.

> ***YOUR TURN!***
>
> The genlock control for SuperGen is a definite plus. The picture manipulation is one of my favorite tools.
>
> ***Robert Binz***
> *Oceanside, California*
>
> I use Pro Video Post's digital effects to manipulate screens, and it does quite well. The only drawback is that you can't incorporate external fonts, and the program doesn't give you a big selection.
>
> ***Harold Beauchamp***
> *Bay City, Michigan*

Although PVP does not accommodate the ANIM format, you can employ color cycling to achieve a kind of "pseudo-animation" of both background pictures and text. I found the picture manipulation tool splendid for resizing, squashing, or stretching an IFF image in order to make room for text.

Modifying a palette, however, is a real chore. First, you must be able to think in terms of RGB color as opposed to the more intuitive HSV (Hue/Saturation/Value), and then use the I and D keys to increase or decrease each red, green, or blue value. Fortunately, the menu displays each color as you change it. I would prefer an Amiga-style requester with sliders.

My biggest gripe, though, is with the interface—it could be so much better. There are too many commands and keystrokes to remember, even with the help of a handy printed template. More efficient would be a combination of keystrokes for the most frequently used functions, balanced with a selection of menus for the more esoteric commands. Another problem is jumpy menus that become tiring to look at during a long session at the keyboard. In addition, because PVP's keystroke buffer is so large, you cannot hold down a key for any length of time. (If you do, you will overshoot for sure, since the system can't keep up.)

Overall, however—and in spite of these problems with the interface—I found Pro Video Post to be a solid program that did what it promised.

Harmoni

If you hum a few bars. . .

By Steve Quinzi

TO THOSE OF you still mulling over which sequencer to buy, we have another horse in the running. Harmoni ($99.95), a new program from ***The Disk Company***, is an inexpensive, easy-to-use, pattern-oriented sequencer.

Harmoni records music in sections (sequences) that you chain together in order to form songs. It is totally alpha-numerically based, with no graphics display of any kind.

Thanks to extensive implementation of keyboard shortcuts and innovative use of the mouse, Harmoni's general operation is most efficient. Like the SoundQuest's programs, Harmoni employs the click-and-drag method of changing data values (upward to increase, downward to decrease). While I like this method a lot, it would be better if fields with wide numerical ranges could be scaled differently than those with smaller ranges. Changing a value from 127 to 1, for example, entails lifting the mouse from the pad several times.

Two-Part Harmoni

Harmoni is neatly divided into two sections: the Sequence mode and the Song mode. The Sequence mode is where you actually record your tracks (up to 24 per sequence). The majority of the Sequence mode screen is filled with the track window, which displays each track's number and name, device (module that plays this part), MIDI channel, and start and end times. Here you will find a field called History that keeps track of editing done to each track. For example, if a track has been quantized, a "Q" will appear in that track's history field. You will also find fields to transpose, mute, or solo a track in Sequence mode.

At the lower-right corner of the screen is the transport control box. The first thing you may notice is that there is no record or play button on the box. Instead, between the fast-forward and rewind buttons is a Run ►

button. To record a track, click on Run and start playing—Harmoni is always recording. If you want to hear what you've just recorded, select the track number and then click the Keep button. If you just hit Run again, the track that you just recorded will be overwritten.

Punch-in recording operates in much the same way as Run. To punch into a track, first set the in and out registers, click Punch, and then follow the same procedure. This took some getting used to. It works fine, but I can see no advantage to this system over the more traditional record/play design.

The rest of the transport control box is pretty straightforward. A Count-in button defaults to a four-beat count and toggles a one-measure count before the sequence starts to run; a Loop button will run the sequence in a continuous loop; and a counter tells you the position in the sequence. You can move through the sequence with either the fast-forward and rewind buttons, or with the scroll bar across the top. To the left of the counter is a small button you use to switch between internal, external (Harmoni sends and receives MIDI song pointer) and "key" sync. Key sync simply makes the sequencer wait for a MIDI key stroke to start.

The last function on the transport control box, the Metronome, is located to the left. You can toggle it by clicking on its button with the left mouse button. Clicking it with the right mouse button opens a window of Metronome options. At the lower-left corner of the screen are four auto-locate registers (A, B, C, & D) that you can set and recall with either the mouse or the function keys. There are two more registers that do not show up on screen; you can only access them from the function keys. The punch-in/out fields also double as auto-locate registers and provide the program with a total of ten auto-locate points.

Harmoni allows you to customize your recording setup by saving some of the more common settings as environments. Clicking on the Environment button opens a window that, among other things, allows you to map each sound source to a specific MIDI channel. Then, you can click on any track's device field and drag up or down to scroll through any devices you have on line.

Other environment options include the ability to turn off the safety nets (the requesters that ask "Are you sure?" every time you do a potentially destructive operation) and to choose whether or not to have an undo buffer. If you wish, you can tailor environments for different situations and save them for later use.

Edit the Track, Jack

Within the Sequence-mode screen, there are two menus of edit functions. Track menu selections act upon the entire track as opposed to the selections from the Region menu, which act only upon specified sections of the track (the punch-in/out registers do triple duty here by setting the beginning and end of the region to be edited). The buttons arranged along the right side of the screen offer other edit options. There is quite a bit of redundancy here, but it in no way detracts from the program, although the space could have been devoted to some different features.

In summary, the editing capabilities let you copy, append, and merge tracks. If the tracks were set to different MIDI channels before you merged them, you can later reverse the process.

Harmoni provides two duration options: You can set all notes within a track or range to a selected value, and you can erase all notes shorter than a specified value. The velocity editing is versatile. You can increase or decrease by percentage or by a given amount, set all values equal, or create crescendos and decrescendos by scaling the velocity levels to change over a given area. In contrast, the quantization is not so versatile. You have two choices—on or off. There is no quantization by percentage or sensitivity.

There are three special effects features that come with Harmoni. The Arpeggiator produces each tone in a chord in succession rather than simultaneously; Invert Pitch inverts a track's pitches against a center point; and Reverse Direction plays tracks backwards.

The Cut, Copy, and Paste commands are located in the Region menu. For copying and pasting within a sequence, they do not act globally, but affect only one track at a time. I find it particularily annoying that the Paste command is the insert type without an option for "paste over." If you need to copy a "chunk" of music to a different location, you have to use the Copy-by-Region command from the Sequence menu. This copies all of the tracks within a selected range to a different sequence. The Sequence menu also includes commands to copy tracks to different sequences either individually or in groups, and an Adjust-Length command to elongate or shorten a sequence.

What a Drag!

To access the Event Editor, first select a track, then click on a control button located to the right of the screen. An Event-list window opens, displaying all of the data on that particular track alphanumerically. You can easily change any value pertaining to note-ons, pitches, durations, or velocity by grabbing and dragging. You can add or delete individual events while you can cut, copy, and paste ranges of events. While there is a merge/paste option called ripple, there is still no destructive paste.

After recording a few sequences (up to 54), it's time to go to Song mode to piece a song. Click on the song/sequence switch at the upper-right corner of the screen, and you will see a sequence list with 54 locations. Click on any location and drag to scroll through the recorded sequences. When you find the sequence you want, release the mouse button, and move on to the next. Each location has a field that you can set to transpose a field or repeat a sequence up to eight times. Harmoni's Insert and Delete commands come in pretty handy here.

The Song mode both loads and saves your tunes. You can load more than one song at a time, provided the total number of sequences does not exceed 52. Just click on a location and load the one you want. Though Harmoni saves songs in its own format, it saves individual sequences in either IFF-SMUS or Standard-MIDI File Type 1 format. Harmoni supports a file type called System Exclusive. To do this, you send a bulk dump from any MIDI device (which does not require a handshake) to Harmoni and save it as a sys ex file.

Though it lacks the sophistication of some of the other Amiga sequencers in its class, Harmoni certainly presents an alternative. Its no-frills, pattern-oriented sequencing makes it a viable contender in the entry-level arena. The program is capable, fun to use, and the well-written manual makes Harmoni very easy to learn. ■

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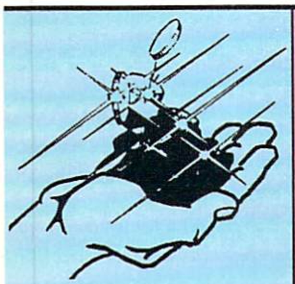
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WB88abc: The Complete Bible - A three disk set, with the entire text of the New Testament and Old Testament. Great search utilities.

New Disks

FD57: Arcade Games Includes 2 true commercial quality games. MegaBall is the successor to Ball; features 5 full musical scores, multiple levels and addicting gameplay. Gravity Attack is a psychadellic trip through several different worlds--each distinctly different.
FD58: GAMES! Includes Steinschlag; a great Tetris clone from Germany with music. SCombat: simulate battle between up to 40 players & monsters. Imperium Romanum: Battle up to 4 players for control of the Mediterranean in this Risk-esque game.
FD59: Game Potpourri Xenon III is an almost exact clone of the commercial game of the same name...a great shootemup. Crossword will take lists of words & automatically generate crossword puzzles for any Epson compatable printer.
WB92: Animation Utilities Includes CyroUtils; utilities for splitting, combining, and creating animations from IFF picture files. Also includes two animations to view or manipulate
DD79abcd: Amiga C Tutorial - This is the most comprehensive C language, Amiga orientated set of tutorials available. Includes full working examples, source code and an incredible set of lessons. Included are full discussions and examples of every topic on Amiga programming. Four disk set, counts as three.

Other Great Disks!

FD5: Tactical Games - BullRun - a Civil war battle game, Metro - you play the role of a city planner. Build wisely and your system will be a success, but poor planning will lead to disaster and financial ruin. Very very habit forming.
FD6: GAMES! - This disk is chock full of games including; Checkers, Clue, Gold - A new slide the pieces puzzle, Jeopard - An enhanced version of Risk, RushHour - Surprisingly addicting, and SpaceWar - Best described as a cross between Combat-Tanks and asteroids.
FD7: PACMAN - This disk contains several pacman type games including; PacMan87, MazMan and Zonix.
FD9: Moria -. This has great graphic controls, multiple spells, similar to Larn and Hack. Play time several weeks!
FD10: HackLite - A dungeon adventure game. Considered a must-have classic. This is the second release of this game on the Amiga. Great Amiga graphic interface. Play time several weeks!
FD11: Las Vegas and Card Games - Las Vegas Craps - The best Las Vegas Craps simulation every written for any computer. Contains extensive HELP features, Also Thirty-One,VideoPoker and more.
FD12A,FD12B: Star Trek, The Game - This is by far the best Star Trek game ever written for any computer. It features mouse control, good graphics, digitized sound effects and great gameplay. Counts as 2 disks. Req. 1Mb and two drives (or hd).
FD13: Board Games - contains multiplayer Monopoly, Dominoes, Paranoids, and others.
FD14: Dungeon Master Hints and Arcade Games - DM maps, spells, item location, and hints and more, also on this disk, Hball - an arkanoid/breakout type game, Trix - a Qix type clone.
FD17: Educational Games - This disk includes several games for the younger members including geography, math, science, and word games, also includes Wheel of Fortune.
FD20: Tactical Games - MechForce(3.72); A game that simulates combat between two or more giant, robot-like machines. Simple words can't begin to give you the feel of piloting a 30 - 40 foot tall, fire breathing, earth shaking colossus that obeys your every whim.
FD26:Arcade Games - Marble_slide, this is a truly commercial quality game. Similar to a Lucas game named PipeDreams, excellent playability and entertainment, Mutants , a small version of the arcade game of the same name, also SuperBreakout a pong/arkanoids type game.
FD27: Arcade Games - This disk is loaded with some great games. Includes, Raceorama a great racing car game with ten different courses, MiniBlast a helicopter gunship type clone, Shark in the same class as froger, and SBreakout the original breakout with more.
FD29: Shoot'em up's - WWII - you're the pilot of a WWII plane flying through enemy territory, you've just been spotted, good luck on you mission, SpKiller - try and penetrate enemy lines with this game, and Retaliator - another great game.
FD31: Games! - Air Traffic Control - a good ATC simulation game, Black Jack Lab - a full featured set of card games, ChessTel - play chess with your friend in distant and remote places with this game and a modem, labyrnth - a well done text adventure game (like an infocom game), and MouseTrap - a 3d maze game.
FD32:Flight Simulator - Includes an instrument flight simulator for a DC10.
FD33: Arcade Games - Ffreddy a mario brothers type of game, Gerbils a target practice game, PipeLine a German interpretation of Pipe Dreams, Tron a light cycles version, and wetroids a wonderful version of asteroids with a hilarious twist.
FD34: Games - Includes WellTrix a derivative of the addictive game of tetris, and new version of BackGammon. Also included are several new "Schwabie type Hacks".
FD35 Omega (v 1.3) - A new outstanding dungeon and outdoors adventure game in a similar vein as hack, rouge, and moria. This version is considerably faster and better that all previous versions. Play time several weeks or months.
FD37a & b:Tactical Games - Empire (2.2w) This great game comes highly recommended. With a full-featured graphic front end.
FD38:Games - Cribbage Master - A great cribbage game and tutor, Spades - a well done card came, ChineseCheckers - A computer version of this classic, Puzz - a slide piece puzzle game and construction set.
FD39a & b:Tobias Star Trek - This is a new, completely different version of Star Trek than that found on FD12. This one was created by the German author Tobias. Now with English instructions. Very Excellent!!! Counts as two disks. Requires 512k memory, a 500, 2000 or Pal.
FD40:Arcade - MiddleEast - a timely arcade game of death and destruction set in Iraq, BackToTheFutureII - a very playable demo version of this soon to be released commercial game, City - a missile command clone.
FD41:Games - Includes Capital Gains - a stock market game, Ball a Arknoids type of clone with many great twists, and Desert Shield - a search and destroy conquer theme.
FD42:Games - Includes SpaceWar3 - a remake of this original Amiga classic, Trippin - a fascinating board game of intrigue, strategy, and player manipulation, Dominion - an engrossing strategy game of galactic war and conquest, Frog - a frogger type clone, and Mines - a very good strategy board game.
FD44: Game - Mechfight is an out of this world role-playing adventure comparable to hack and moria. The setting, interplanetary colonies and space stations. In your quest to explore the world, take time out to liberate bad guys of their most valuable possessions, engage in a mortal combat or two against robots and alien life forms, pick up a new amiga 9000. Most of all, don't forget to stay alive...
FD47: Arcade Games - Contains DownHill - a demanding computer slalom ski game, MicroPac - a Workbench mini-pacman game, CrackOut - a break out clone, Jet - a superb aerial dogfight game, AmegaRace - an interesting asteroids type of game, and WindyDay - a unique arcade shoot'em up.
FD49:Chaos Cheats - This disk contains an everything you wanted to know about cheat set for Chaos Strikes Back, including full maps, spells, object locations, super characters and more.
FD50: Submarine Game - Sealance, one and a half years in the making, this is an outstanding submarine tactical game. Commercial quality, highly recommended.
FD52: Classics Games - PetersQuest a well done Mario brothers type of game, Jymbc a two player missile command clone, and Vstank a tank commander game.
FD53: Great Arcade - On this disk is a wonderful implementation of the ever popular classic arcade game Defender. Also contain Air Race a WWII flying ace arcade game, and Psycoblast new creation idea game.
FD56: Arcade - Includes SpaceWar, HueyRaid a well done helicopter arcade game, and PowerPong a great expanded pong game.
WB2: General Interest - contains, Galaxy a program that represents the collision of two galaxies, Larn - an adventure/action game similar in concept to rogue or hack, but with a much different feel. Try it, you'll like it!, StarChart - a program that lets you display and identify about 600 stars, galaxies and nebulae visible in the Northern hemisphere.
WB4:Telecommumnication - This disk contains several excellent pd communication programs designed to get you on line quickly and easily, Access (1.42) - A very nice ANSI term program based on Comm v1.34, but with the addition of transfer protocols, Comm (1.34) - Last version of one of the best public domain communications programs ever made on the Amiga, Handshake (2.12a) Handshake is a Full featured VT52/100/102/220
WB5 - Fonts #1- Several fonts (35) for the Amiga, also included are five PageStream fonts,and ShowFont - a font display program.
WB6: Video Fonts #2 - ShowFont(4.0) This program allows you to quickly and painlessly view all 256 characters in a typical font. Large AmigaDos system fonts (many up to 56pts).
WB7: Clip Art - This disk is loaded with black and white clip art. Art includes, trees, watches, tools, US and State maps, and more.
WB9:Icons - Truly a multitude of various types and kinds. Also includes IconMiester, IconLab, and others great utilities to help generate icons.
WB10:Virus Killers - The latest and best VirusX(4.0), Kv(2.1), and ZeroVirus(1.3).
WB11: Business - Clerk(4.0), finally a full featured business accounting PD program for the small to medium company. Includes receivables, payables, end of month and much much more.
WB12: Disk Utilities - This great disk is loaded with wonderful utilities for everything including making disk labels, disk cataloging, disk optimizing, disk and file recovery archive and organizing, and all sorts of file manipulation. A real must have!
WB13: Printer Drivers and Generator - over 70 different drivers, and if these don't do it, with PrtDrvGen you can make your own.
WB14: Video- on this disk are several utilities for the video enthusiast. We have included multiple slates, video titling, Bars and Tone, Gray Scale, Screen fades and swipes, Interlace toggles, and SMPTE Calculators .Also on this disk is a full featured video cataloging program.
WB15: Business - This disk contains a spreadsheet, a database, a project/time management program and financial analysis (stocks).
WB16: Business - This disk contains an inventory manager, a loan analysis program, a great calendar/scheduler, a rolodex program, and pennywise a good "Cash Book" accounting for home or office.
WB18: Word/Text Processors - This disk contains the best editors. Includes,TextPlus (v2.2e) a full featured word processor, Dme(v1.35) a great programmers editor with strong macro features,TexED(v2.8) an enhanced Emacs type editor, and a spell checker.
WB20: General Interest - DiskSalv V1.42 a disk recovery program for all Amiga file systems, FixDisk V1.0 another file recovery program with features DiskSalv doesn't have, 3DLookt gives a 3D appearance to your WorkBench, Clean V1.01 a program to de-fragment memory, Tracer - trace any part of an image.
WB22: Fonts #3 - Several more great fonts. These, like the other font disks work great with Dpaint and WYSIWYG word processors.
WB23: Graphics and Plotting - Plot (20b) a three dimensional mathematical function plotter. Can plot any user defined function, BezSurf2 - produce awesome pictures of objects one could turn on a lathe. Can also map iff image files onto any surface that it can draw. Now compatible with most 3D packages, and VScreen - makes a virtual screen anywhere, great for DTP .
WB24:Animation and Paint - On this disk, DA a complete commercial quality cell orientated animation package. Movie an "ANIM" player for standard animation. QuickFlix an IFF slide show and cell animation program. Also on this disk are two PD paint programs of good quality.
WB25:Educational - On this disk are two programs that can generate maps of differing types, World Data Base uses the CIA's data base to generate detailed maps of any entered user global coordinates. Also Paradox a great demonstration of Albert Einstein General Theory of Relativity.
WB26: Disk Utilities #2 - MrBackup, KwickBackup - two well done utilities to help with harddisk and floppy disk backups, FileMast - a binary file editor, Labelprinter - Disk label printer with very powerful features.
WB27: Nagel - 26 Patrick Nagel pictures of beautiful women.
WB29: Graphics and Sound - This disk has several different Mandelbrot type programs for generating stunning graphics. Includes, MandelMountains - a realistic terrain generator, Fracgen - generated recursive fractals from user input, Mandelbrot and Tmandel - two fast mandelbrot generators, also Mostra - the best IFF display program to date, will display ALL IFF's including Dynamic HAM, and Sound - a great IFF sound player, will play anything. Try this disk, you'll love it!
WB33:Circuit Board Design - several terrific routines for the electronic enthusiast, Including PCBtool - a circuit board design tool, LogicLab - circuit logic tester, and Mcad (1.26) a well done new release of this PD CAD program, now comes with predrawn common circuit components for insertion into schematics.
WB34: Utilities - Several well done utilities, some will require moderate knowledge of a CLI or Shell for setup, Chatter Box - this one will play any user defined sound after any event (ie. disk insert, mouse click, disk removal...), , Artm - The Amiga real time monitor, gives you full control of the Amiga OS, very powerful program, Helper - help program to make learning the CLI easier, and more!
WB35: 3d Graphics - This disk contains several neat programs to use with your 3d modeling/raytracing programs 3dFonts - Full vector font set for use with 3d programs, FontMaker - make 3d fonts from any system font, Make3DShape - create 3d shapes from any image, DumptoIFF - create 3d animations preserves pallet, and World3d - a demo program of a front end for use with DKBRender.
WB36: Graphics - On this disk are several programs to create stunning graphical images including, MPath - creates swirling galaxy images, Roses - produce an unlimited number of variations of images that a symmetrically similar to a rose,

WB36 cont. SimGen - display those spectacular images as part of your workbenck screen, and RayShade - a very good raytracing program, create your own beautiful 3d graphics.
Wb37: Educational - Educational games and puzzles that cover math, geography, spelling, and books. Ages 6 - 15
WB38: Plotting and Graphics - Plotxy is the most powerful full featured plotting package. Used by many colleges and universities. A welcome addition to our library! Highly recommended. Plans - a incredibly well done Computer Aided Drafting program, very full featured. Tesselator - a program that helps generates fantastic looking, recursive M.C. Ecsher type pictures.
WB39: Music - Intuitracker is a German offering of an exquisitely well done program that allows you to play music on your Amiga with CD like controls. Lets you strip out music from your favorite games or others and include them in your music library.
WB40: Music - "CD on a disk", 90 minutes of modern music on this well presented collection.
WB41: Music - MED an incredibly well done, full featured music editor. Create your own stunning music directly on your the Amiga. Similar to SoundTracker but better. Very powerful easy to use program.
WB43:Business - This disk contains AnalytiCalc - probably the most powerful spreadsheet program on the Amiga. A full featured spreadsheet with many features expected in a commercial package. Requires 1.2 MB of memory!
WB46:Clip Art - HighRes clip art with the following motifs - embellishments (borders, dodads ,...), people, and transportation.
WB48: Clip Art - HighRes clip art with the following motifs - Holidays, music, medical, and misc.
WB49abc:Animation Sampler - On this three disk sampler set (counts as two disks) are some of the best animations that have been created over the last three years. Several examples of "Movie" type animations some with spectacular raytraced reality (coolroby, watch, spigot and egg). Also several european style or "Demo" animation with incredible graphics and outstanding electronic music (akrilight, copersine, doc, dps2010, impact, and logodemo). These truly show off the creative edge of an Amiga!

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WB50: Animation - Seven of the best european style animations or "Demos", including - scientific 451, subway (a U.S. entrant, also our favorite), sunride, thrstdemo, tnight, waves, and woow.
WB51: Animation- On this disk are two excellent movie style animations including ShipRotation - a futuristic space ship orbiting a surrealistic world (one of the best), and RV-3 - a dpaintIII anim of a rather wacked out airplane.
WB53:Graphics- The disk contains C-light - The easiest to use raytracing we have seen to date. This one started out life as a full featured commercial product similar to Sculpt3d. Raytracing programs can generate stunning, realistically shaded objects. Also, sMovie - a full featured video text titler similar to ProVideo, Broadcast Titler. Great video scrolling, wipes, special effects, and more...
WB54:Printing - This disk contains several routines to help with the chore of printing. Includes Gothic - Finally a Banner printer for the PD! PrintStudio -a well implemented all-purpose printer-utility with a very comfortable graphic interface and many advanced features, Lila - with ease, print ASCII files to a PostScript printer, and many more.
WB55:Application - XCopyIII - a full featured disk copier, make backups of write protected disks. RoadRoute - find the quickest route from one city to another, highway description included, Diary - a diary program like "Dougy Howard M.D", Cal - a calendar program, Magman - a database tailored to maintain records on articles and publications.
WB57:Animation - This disk has several "Demo" style animations, Including, Blitter, Lolly, Sun5, vertigo, vortex, and xenmorph.
WB59:Business - contains a great, very full featured stock market technical analysis and tracking program, also an appointment calendar, and more.
WB61:Intermediate Utilities - Includes programs to help to drasticaly decrease flicker in interlace and hi-res modes (antiflick), an Atari-st emulator, an eprom programmer, turn your amiga into an eight channel digital data analyzer or ocilloscope, and more.
WB62:Midi Utilities - Several useful midi utilities including, programs to transfer to and from several music programs to midi, a midi sysex handler, a midi recorder with timebase, display midi info, file sequence player, and a few scores.
WB63:Disk Utilities #3 - Several highly recommended programs to aid in removing duplicate files from your hard drive, performing file backups, Binary editing, fast formatting, file recovery, disk track recovery, and forced DISK VALIDATION of corrupt disks.
WB66:Icons #2- Lot's of neat icons. Also, several wonderful programs that to let you create your own icons, modify and manipulate icons and info structures.
WB68:Music Utilities - several good utilities for the Amiga music enthusiast. Includes, Noisetracker - a great music creation program, Sonix2MOD - converts sonix to .mod files which then can be used by noisetracker, soundtraker, and MED, SpeakerSim - a speaker design tool demo, Wondersound is an additive harmonic instrument design tool with a separate envelope design window and 16 relative harmonic strength and phase angle controls.
WB69: Music - This disk has over 90 minutes of classical and modern electronic music for you Amiga.
WB70:Desk Top Pub - Atcp - transfer Macintosh screen fonts, Mac or IBM format .AFM metric files, to Amiga screen fonts and PPage .metric files. With this program open door to the libraries of Adobe and PostScript type!, Calendar - month templates in PS form, Post - a full featured post script file display and print utility.
WB71:C64 Emulation - The A64 Package is a complete, very powerful, Commodore 64 emulator.
WB75: Music - over 100 instruments files (.inst) and sample sound files (.ss) for your music programs.
WB76: Applications - This disk contains Stichery - a often requested knitting design program, Lotto - a rather complete lottery tracking and prediction utility, SSS - this screen capture program can grab almost any screen including games, Today - a personal calender, Tarot - fortune teller, and Grammar - grammar checker.
WB78: AV - On this disk are two Amiga Vision programs (bubbler, sync) written by Lou Wallace, chief technical editor of Amiga World. These programs are marvelous examples of how too's with AV.
WB79: Home & Business Accounting - Includes Ckbacct - the most complete checkbook accounting program going, LCDCalc - this well done calculator has a very large display and operates from the keyboard or mouse, Mileage master - monitor your automobile mileage with this mileage log, Grammar - a grammar checker, and Worldtime - find out what time it is in up to 50 global cities.
WB80:Graphics - Raytracing programs generate absolutely stunning realistic looking planes, rockets, buildings..., and surreal images often consisting of highly polished spheres and objects. 3-D Master is the most powerful EASY-TO-USE of it's kind we have seen to date. This is easily better, and more full featured, than similar commercial programs costing in the hundreds of dollars.
WB81: Great Applications - DataEasy a very easy to use, database program. Don't let the ease of use fool you, this is a very full featured database program including full printer control for address labels and mail merge applications. Also includes, TypeTut a good typing tutor, RLC a full featured label printer, Banner, a multi-font banner maker, and Budget a home accounting in a program. Highly recommended.
WB82:Animations - Four full length, well done "movie" style animations. Including, Coyote, JugglerII, GhostPool, and Mechanix. Two disk set, counts as one!
WB83: Computer Art - this disk has some of the best Amiga generated computer art that we have collected in the past 5 years.
WB85: Graphics - Contains several programs for manipulating 24 Bit color images (ham-e) and a rather nice Iff Image processing package.
WB86: Amiga Vision - Contains the Centurion Press, An Amiga newspaper by Lou Wallace.
WB90: Rippers, Strippers and Beats - For the Amiga music enthusiast, this disk contains many programs designed strip music from your favorite games and programs. Music can then be played with your favorite Pd Music program. Also contains Drums, a very nice drum machine. This disk can require moderate knowledge of the CLI.
DD45: AREXX PROGRAMS - This disk contains several useful arexx programs and examples, PopCLI4 - The latest of a must have utility.
DD47: Pascal - This disk contains everything needed to program in Pascal. Includes, A68k (1.2) 68000 assembler, Blink linking software and PCQ (1.0) a modest Pascal sub-set compiler.
DD49: C Compiler - contains zc(1.01) fully K&R, zcc(1.0) front end, A68k(1.2) assembler, Blink linker.
DD50: ARexx #2 - a must have set of tutorials on ARexx and several useful examples and utilities for ARexx development.
DD51: Circuit Analysis - Aspice (2.3) A full featured program for electric circuit analysis.
DD52: Scientific - Includes Elements - an incredibly well done periodic table program with source, Scientific plotting - over 600k of Lattice C source routines that can be included in your own programs.
DD54: Compression - This disk is loaded with ALL of the best file compression programs and aids for the Amiga. Many of the programs can be used by the new user. Includes Arc(2.3), Lharc(1.0), Lhwarp(1.03), Pkax(1.0), PowerPacker(2.3a) a must have by all, Zip(1.0), Warp(2.04), and Zoo(2.0). Also IFFcrunch an excellent compression for IFF files.
DD55: ARP - On this disk you will find the complete ArpRel3.0 release including the full user docs, the full Developers guide. ARP is the official AmigaDOS Resource Project (ARP) release 1.3. ARP makes many improvements to AmigaDOS and makes your system easier to use from the CLI.
DD57: Advanced Utilities - Msh - like Cross-dos, copies files to and from MS-DOS, Pal-NTSC - convert any pal program to NTSC and vice versa, Also several utilities that improve your startup-sequence, plus 25 more programs.
DD62: Basic and Xscheme - Cursor - a full featured Amiga Basic compiler, sbasic and ftext - several wonderful routines to help in basic programers, and Xscheme - an interpreted object oriented language.
DD64 Amiga Programmers Manual - The fully comprehensive Amiga programming manual with source code examples and easy to understand tutorials!
DD65 C Tutorials - Several well done tutorials on how to program the Amiga. Includes tutorials and working examples on Device drivers, IFF reads and writes, Sound implementation, Arcade game design and implementation, Double Buffering, and others. A must have for Amiga Programmers.
DD66 Programming ToolBox - Many programs to help in your development efforts (most for C some for basic) Includes programs to generate requesters, an incredible spritemaker toolbox, to greatly aid compiling, convert DPaint brushes to C structures, a great library manager, and many more wonderful time savers!
DD69:Advanced Utilities - SerNet and ParNet - Connect two Amiga's and share resources, MemMonitor - Similar to WFrag but greatly improved, Selector - put menus on your workbench screen, and more.
DD71:C compiler - This disk contains Dice, Matthew Dillon's full featured, powerful C compiler and environment system.
DD72:VT Emulators - Contains three powerful, full featured vt emulators, with many advanced features including kermit, xmodem and tektronix protocols. VaxTerm, VLT, and more.
DD77: Fortran - Contains a full featured FORTRAN77 environmental development system. Also contains EzAsm a strongly macro dependent 68000 assembler.
DD78: Menus & System Enhancements - Several neat programs to aid in launching programs from special icons (Next computer style), adding WorkBench menus and more. Also contains many useful programs to determine operation system configuration, memory usage, load and many other important utilizations.

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The Last Word

Kudos, complaints, comments, concerns, and contributions from our readers.

Unix Is Good, But Hail, AmigaDOS!

Robert Freeman argues ("Repartee," May '91) that the only reasonable choice in operating systems for the Amiga is Unix. While the arrival of one of the most complete implementations of Unix SVR4 makes possible a new professional market for the Amiga, I hope it will never replace AmigaDOS, which is one of the cleanest and most efficient multitasking operating systems in the industry. In addition to the professional look and feel of 2.0, Commodore now also provides high-quality networking solutions for communicating with a wide variety of platforms.

Unix for the Amiga deserves coverage, for it has become the most popular operating system in the industry. But Unix is a difficult system to learn, and it requires copious amounts of hard drive and memory. Hopefully, people will always examine new and exciting technology rather than simply accepting the "standard." The Amiga offers the best of both worlds.

Chris P. Demiris
Salt Lake City, Utah

Prince of Computers in Persia

I am proud owner of an Amiga 500 since 1987...and now waiting eagerly for a Video Toaster. You may not believe, but here in Iran, Amiga is the favorite computer. Hardware and software support for this computer are very low here, but people love to work with it, and now many use it seriously for applications like video productions and advertising. Recently, most of the TV ads have been made by Amiga.

Also, I have seen other situations in which Amigas play important roles and duties: for example, in industrial areas like Polyacryl Corp. factory in Iran, and in hotels that use Amiga for their reception and other applications. Here some people are working on programming Amiga for serious word processing in Persian language (Farsi), which is written from right to left, and now there are a few packages available.

Shame on me which I have written this letter by typewriter instead of my Amiga. Sorry, my Amiga is very busy; my kids are playing "Prince of Persia" on it just now!

Reza Molavi
Iran

Toaster's Amiga Cover-Up

At the recent National Association of Broadcasters convention, I saw NewTek demonstrating the Video Toaster to a crowd of amazed onlookers, claiming that a complete system—including the Toaster, a "cpu," and all the software needed to set up and use the "All-in-one Studio in a Box"—could be purchased directly from NewTek...and for only $3995. A careful examination of the press kit failed to find the word "Amiga" anywhere. In fact, NewTek went so far as to cover up the Amiga logo with a label reading "Video Toaster."

"He seemed almost paranoid that I might spill the beans... and I did!"

Pretending to be a common Amiga-illiterate broadcaster, I went up to a NewTek representative and inquired about the mysterious "cpu." He told me that it was NewTek's custom computer, designed for use with the Video Toaster. (It's actually a stock A2000 with a GVP 4-meg memory card and a hard drive.) Well, when I revealed that I was a loyal Amigoid, the rep's tone quickly changed. He seemed almost paranoid that I might spill the beans to the rest of the convention attendees. And spill the beans I did! The beans in question include the fact that ToasterPaint will not run effectively with their proposed 5-meg system, not to mention that LightWave 3D needs at least an '030 and a 68882—a far cry from the stock 68000.

I demanded to know how they could deceive people by offering a "complete package" that will not do what they claim it will. The representative's reply was "Well, most of the people who are gonna buy the Toaster probably aren't gonna use those programs."

Justin Gunn
Beverly Hills, Calif.

Editor's note: From speaking with NewTek officials, I gathered that creating a new identity for the Toaster was the only way to get access to Mac and PC-oriented distribution channels. If this, and Commodore's CDTV, result in more sales of Amigas, then I'm all for it.

—Doug Barney

Hey, Jesse! How 'Bout Givin' *AW* a Medal?

I want to talk about censorship. In the ad on page 60 of your June issue, *AmigaWorld* censored the top half of a woman's body. I'm not saying this ad is in good taste, but I've also seen it *au naturel* in video-game magazines (read mostly by males under 20). I find it foolish of *AmigaWorld* not also to censor the ad on the opposite page with the woman waving her panties. Why not?

Carlos Camacho
Norwich, Conn.

Send your letters to: The Last Word, *AmigaWorld* Editorial, 80 Elm St., Peterborough, NH 03458. Letters may be edited for space and clarity. ■

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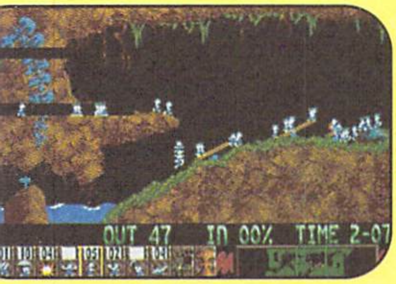
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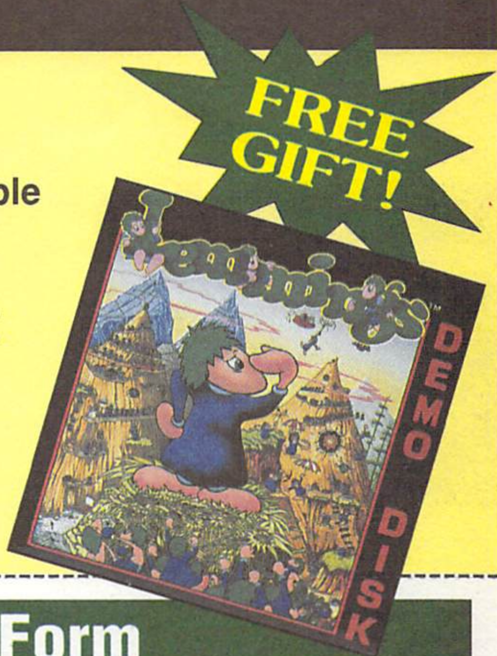
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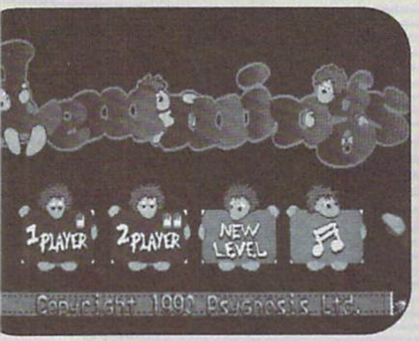
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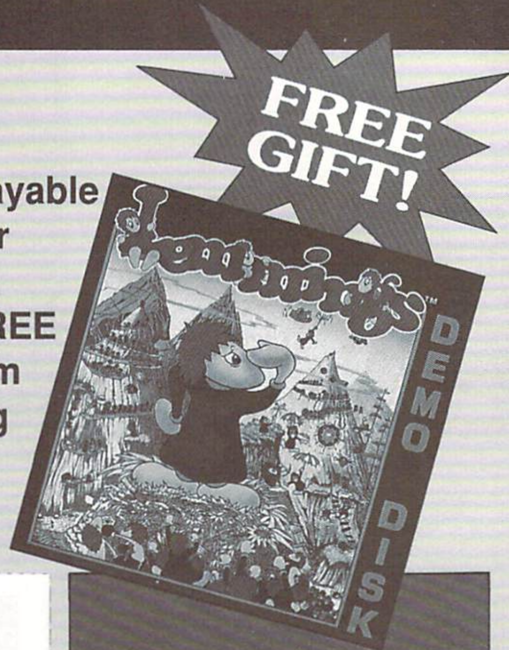
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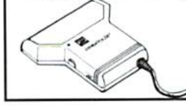


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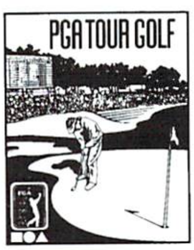
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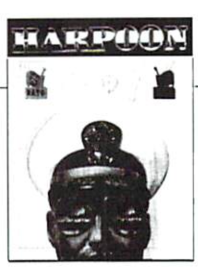
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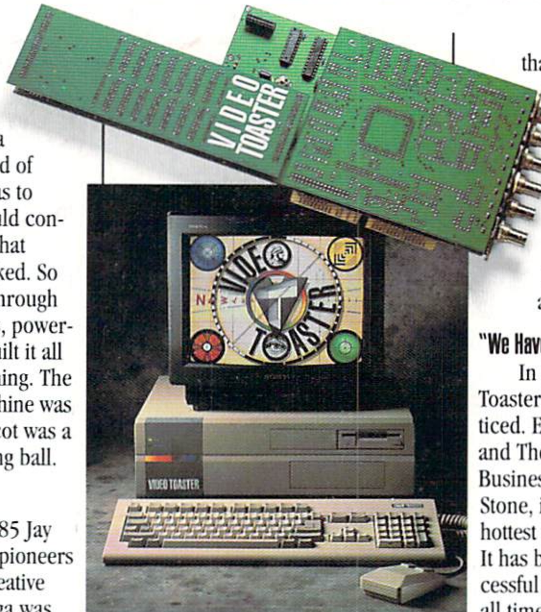
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